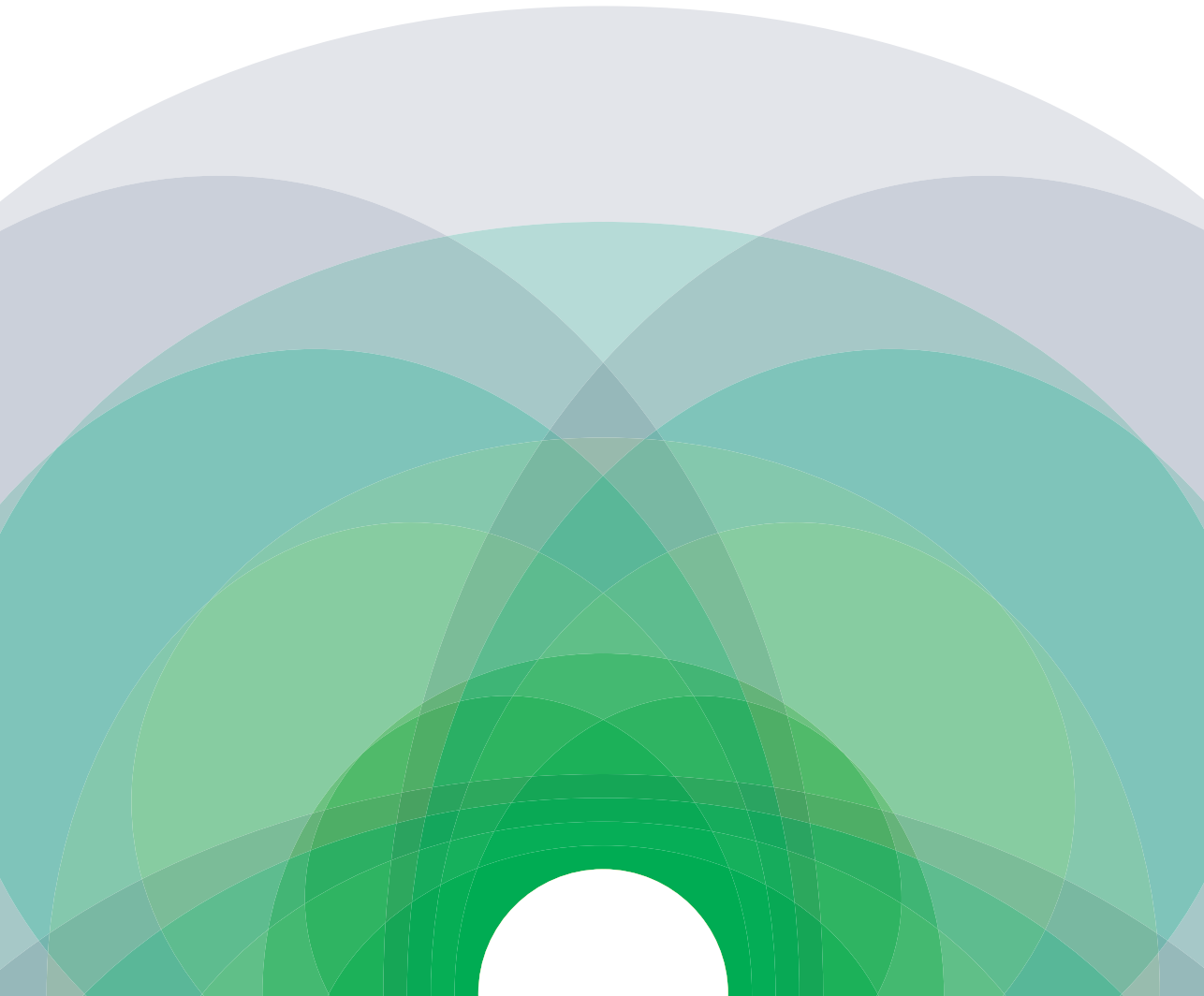
Organisational environment and [illegible] with intellectual disabilities: an ecological perspective

VANESSA OLIVIER-PIJPERS



Organisational Environment and Challenging Behaviours in Residents with Intellectual Disabilities: an Ecological Perspective.

Organisatiecontext en probleemgedrag bij bewoners met verstandelijke beperkingen: een ecologisch perspectief.

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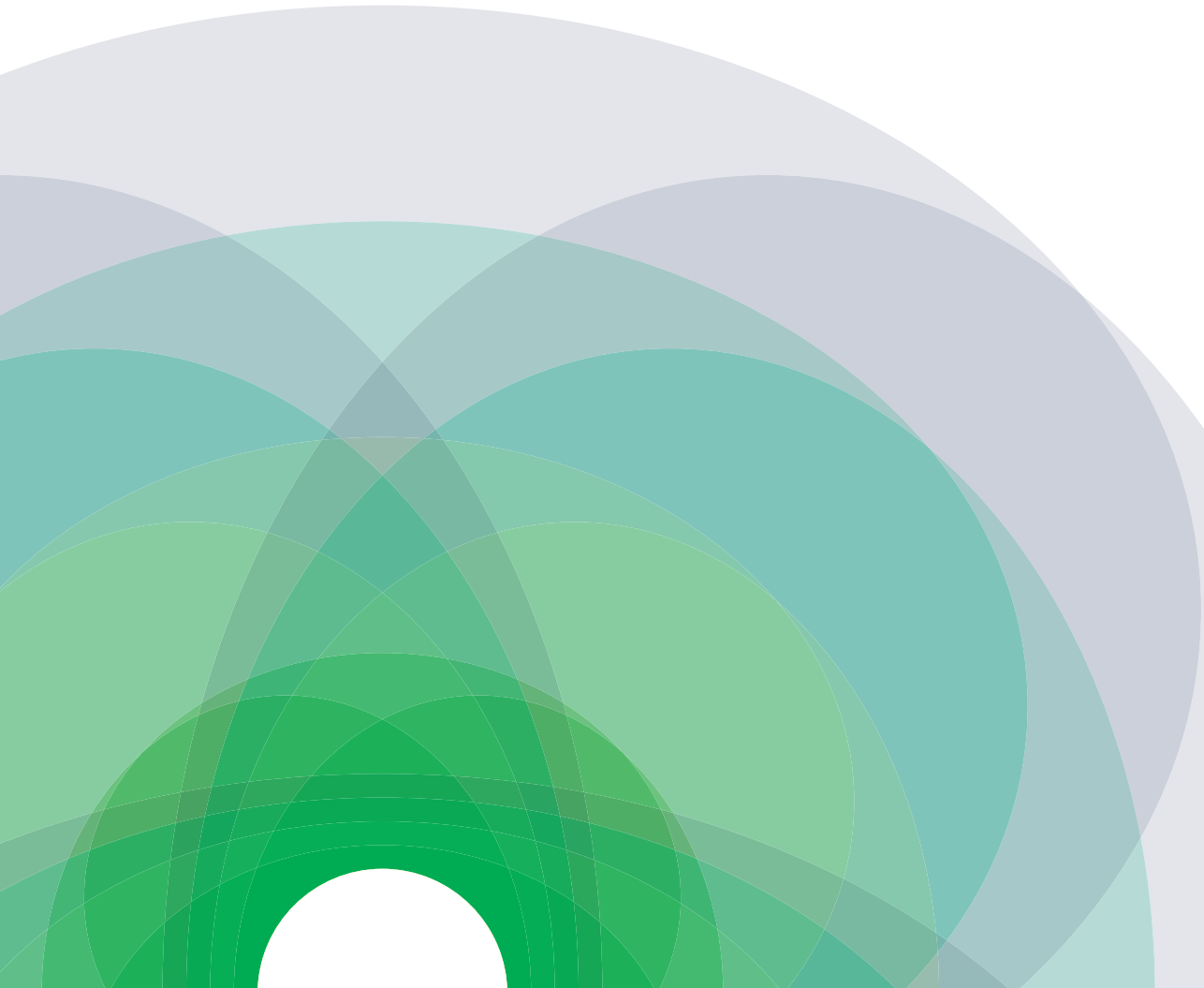

Chapter 1

General introduction

1.1. INTRODUCTION

In the Netherlands, 73.000 people receive intensive daily support in residential disability service organisations (Programma Volwaardig leven, 2018). Residents of such facilities with intellectual disabilities are at increased risk of developing challenging behaviours, defined by Emerson (2001, p. 3) as:

> 'culturally abnormal behaviour(s) of such an intensity, frequency or duration that the physical safety of the person or others is likely to be placed in serious jeopardy, or behaviour which is likely to seriously limit use of, or results in the person being denied access to ordinary community facilities.'

These behaviours include physical and verbal aggression, self-injury and problematic sexual and stereotypical behaviours. Bowring and colleagues (2017) reported an 18.1% overall prevalence of challenging behaviours in people with intellectual disabilities, and the prevalence of severe challenging behaviours is estimated to be 5–10% in this population (Cooper, Smiley, Allen *et al.,* 2009; Cooper, Smiley, Jackson *et al.*, 2009; Emerson, 2001; Hamlin & Oakes, 2008; Hensel, Lunsky, & Dewa, 2014; Lowe *et al.*, 2007).

Challenging behaviour is displayed by a disability service organisation resident in a specific context; it is a social construction (Emerson & Einfeld, 2011). Whether behaviours are labelled as challenging depends on social rules defining appropriate behaviour in that setting, the resident's ability to account for them, others' beliefs about their cause and professionals' capacity to manage them (Emerson & Einfeld, 2011). Challenging behaviours can lead to safety risks and place in serious jeopardy the quality of life of the residents displaying them, as well as that of other residents with intellectual disabilities and other people in their social and professional support systems (Allen *et al.*, 2005; Allen, Lowe, Moore, & Brophy, 2007; Carr, 2007; Emerson, 2001; Dilworth, Philips, & Rose, 2011). Support services for residents with intellectual disabilities and challenging behaviours may also threaten residents' quality of life (Carr, 2007), as they involve frequent use of restraint measures, seclusion, medication and deprivation, as well as high rates of abuse by other residents and systematic neglect (Allen *et al.*, 2005, 2007; Emerson, 2001; Emerson & Einfeld, 2011).

1.2. CHALLENGING BEHAVIOUR IN THE SUPPORT SERVICE CONTEXT

Challenging behaviour is the result of a resident's interactions in his or her social context (e.g. with other residents and staff) and in the broader context of the organisational environment (e.g. the resilience and capability of the service organisation) (Allen *et al.*, 2013). Interventions at different levels may reduce the occurrence of challenging behaviours in residents of such facilities.

They may include interventions at the individual resident level (e.g. cognitive therapy, medication), those implemented by staff and other professionals (e.g. use of support methods) and those implemented at the organisational level (e.g. enhancement of organisational values and structures to prevent challenging behaviours, minimisation of the use of restraint measures, and shifting of focus from risk management for challenging behaviour to residents' quality of life) (Allen *et al*., 2013). The implementation of interventions at the organisational level may require guidance provided by national policies and views on challenging behaviour management in disability service organisations (Allen *et al*., 2013). Thus, personal, support service, organisational and societal aspects may all influence residents' quality of life, and thereby their challenging behaviours (Gomez *et al*., 2016).

The English National Institute for Health and Care Excellence (NICE) guidelines (NICE, 2015; Murphy, 2017) and the Dutch *Multidisciplinaire richtlijnen Probleemgedrag bij volwassenen met verstandelijke beperkingen* (Embregts *et al*., 2019) propose, instead of a focus on the person with intellectual disabilities, a holistic approach in the case of challenging behaviours (e.g. with consideration of the physical environment, staff communication, management support and guidance of staff through the establishment of clear organisational values). These guidelines include statements recognising the limitations of previous research on challenging behaviours (Embregts *et al*., 2019; McGill *et al*., 2018). In studies of challenging behaviours, a holistic approach would be valuable, as the occurrence of such behaviours could be reduced substantially through interventions focussed more on the resident's environment than on the individual him- or herself (Deveau & McGill, 2019).

1.3. ECOLOGICAL THEORY

Urie Bronfenbrenner constructed an ecological theory of human development and functioning, which might be usefully applied in a holistic approach to the study of challenging behaviours in disability service organisation residents. In the literature, Bronfenbrenner's theory is referred to as 'bioecological theory', 'socio-ecological theory' and the 'process-person-context-time model' (Bronfenbrenner, 2005; Bronfenbrenner & Morris, 2006; Griffone & Phenice, 2016). In this thesis, the term 'ecological theory' is used. Bronfenbrenner (1979, 1994, 1999; Bronfenbrenner & Morris, 2006) states that a person's levels of functioning and development are the results of complex reciprocal interactions between an active, bio-psychologically developing person (the ontosystem) and the environment. This environment (composed of persons, objects and symbols) is conceived as four nested 'layers': the micro-, meso-, exo- and macrosystems. The person and these systems are interrelated through constant interactions and influences. Furthermore, the person, the environment and interactions between them change over time (the chronosystem) (Bronfenbrenner, 1979, 1994, 1999, 2005; Bronfenbrenner & Morris, 2006; Tudge, Mokrova,

Hatfield, & Karnik, 2009; Institut National de la Santé et de la Recherche Médicale [INSERM], 2016).

The ontosystem consists of personal biological (genetic and physical) dispositions and psychological characteristics (e.g. a resident's skills, character and experiences) (Bronfenbrenner & Morris, 2006; INSERM, 2016; Tudge *et al.,* 2009). The microsystem consists of activities, social roles and relationships playing out in face-to-face settings, such as resident–resident and resident–staff member interactions. Each person is part of more than one microsystem. The mesosystem refers to the interactions among different microsystems (e.g. between family members and group home staff, between staff team members). The exosystem (the disability service organisation) includes relationships between a resident's microsystems and proximate elements. A resident does not interact directly with the exosystem, but what happens or is decided there (e.g. actions of higher management or employees of facilitating services) affects his or her microsystem. The macrosystem consists of the all-encompassing patterns of rules, funding systems and attitudes that are shared in the micro-, meso- and exosystems, and are characteristics of a culture. The chronosystem consists of changes in, for example, the resident (ontosystem), staff member–resident interactions (microsystem), the organisational structure (exosystem) and societal views (macrosystem) (Bronfenbrenner & Morris, 2006; Tudge *et al*., 2009; Shogren *et al*., 2013.

1.4. THE ORGANISATIONAL ENVIRONMENT OF SUPPORT SERVICES

The relationships between the organisational environments of support services and the challenging behaviours of their residents with intellectual disabilities are expected to be complex (Deveau & McGill, 2019; Dilworth *et al.*, 2011; Emerson & Einfeld, 2011). Organisational aspects that appear to influence challenging behaviours include the organisational culture and finances, via staff attitudes and sufficiency (in terms of the number of staff members), which in turn may influence the provision of support services (Deveau, Gore & McGill, 2020; Gomez *et al*., 2016; Bigby & Beadle-Brown, 2018). Residents' challenging behaviours also seem to be linked to organisation managers' practice leadership (e.g. serving as a role model, expressing positive values, acknowledging competencies of staff members), and these managers are in turn influenced by extra-organisational factors (e.g. regulation and government policies) and intra-organisational factors (e.g. daily personal interactions, ability to influence staff practices) (Deveau *et al*., 2020). Heads of group may also undertake practice leadership and be responsible for the translation of policies into daily practice, in turn influencing challenging behaviour management (Deveau & McGill, 2019).

Organisations change their support services in efforts to enhance residents' quality of life. The impacts of these changes may differ among organisations due to, for example, the extent to which a new working method fits the organisational environment (Hulgin, 2004). Furthermore, organisations differ in how much they invest in the implementation of new working methods and

their execution in daily practice, which also influence residents' challenging behaviours (Bould *et al.*, 2016 Deveau & McGill, 2019). Thus, organisational environments are dynamic, and organisational changes may impact residents' behaviours.

Researchers have examined the relative importance of certain organisational aspects in the context of relationships between the organisational environment and disability service organisation residents' challenging behaviours. For example, the in-area placement of residents (i.e. near their families) costs more than out-of-area placement, but seems to be more suitable because of the ethical issues associated with the placement of vulnerable people away from their homes and families, and because of the improvements observed in residents' quality of life, in alignment with the organisations' missions (Perry *et al.*, 2013). In addition, the transition from hospital-based to community-based resident support may be more in accordance with an organisation's vision for support services (e.g. provision of a more homelike environment with more contact with staff and family members, which reduces challenging behaviour), but does not appear to result in better quality of care (Perry *et al.*, 2011). Thus, identification of the organisational aspects most relevant to challenging behaviour management is difficult.

Organisational aspects such as culture and finances have been linked to the prevention of challenging behaviours, but little empirical research on this topic has been conducted from an ecological perspective (cf. Bigby & Beadle-Brown, 2018). For example, managers' leadership style appears to be of importance to challenging behaviour management, but the influences of other organisational aspects (e.g. organisational systems and processes, general management) on this relationship may also need to be examined (Bigby & Beadle-Brown, 2018; Bould *et al.*, 2016. Aspects at other ecological system levels, such as the quality of staff interactions (microsystem), leadership style of senior staff members (mesosystem) and organisational and national policy changes (macro- and chronosystems) may also be associated with managers' leadership style (exosystem) in relation to the challenging behaviours of residents with intellectual disabilities (Allen *et al.*, 2013; Beadle-Brown *et al.*, 2014; Deveau & McGill, 2019; McGill *et al.*, 2018; Tossebro *et al.*, 2012). Researchers should seek to identify the most relevant organisational and support service aspects, as well as the roles that they play in preventing and diminishing challenging behaviours in residents with intellectual disabilities (Bigby *et al.*, 2019; Gomez *et al.*, 2016). Ecological theory enables more holistic examination of the complex interrelationships involved in the effects of the organisational environment on the challenging behaviours of residents with intellectual disabilities.

1.5. THESIS AIM AND RESEARCH QUESTIONS

The aim of this thesis was to explore the relationship between the organisational environment and challenging behaviours in disability service organisation residents with intellectual disabilities using ecological theory. Its findings may contribute to guidelines for daily practice to enhance

the provision of support and treatment to these residents in the context of disability service organisations, and provide suggestions for future research (Bigby & Beadle-Brown, 2018; Bigby, *et al.*, 2009; Carr, 2007; Dilworth *et al.*, 2011; Emerson & Einfeld, 2011; Felce, Lowe, & Jones, 2002). The thesis was conducted to answer the following research questions:

1. To what extent do different organisational aspects influence challenging behaviour in residents with intellectual disabilities?
2. Which changes in disability service organisations have been made for residents with intellectual disabilities and challenging behaviours?

1.6. THESIS OUTLINE

Chapter 2 describes a scoping review of the scientific literature on the influence of the disability service organisational environment on the challenging behaviours of residents with intellectual disabilities. This literature review was conducted using ecological theory as a sensitising framework and included scientific studies published in English between 2000 and 2016. **Chapters 3** and **4** describe qualitative studies conducted to explore the relationships between aspects of the organisational environment and residents' challenging behaviours from the perspectives of heads of group, psychologists and managers of residential disability service organisations, and from the perspectives of residents and their representatives, respectively. The ecological system levels were used as sensitising concepts in these analyses to extract relevant themes from the data. **Chapter 5** describes the quantitative application of ecological theory to examine the same topic, via a questionnaire-based cross-sectional study conducted with group home and day-care staff members, heads of group, managers and psychologists at 21 residential disability service organisations. Forty-five ecological system aspects and three types of challenging behaviour (self-injurious, aggressive/destructive and stereotypical) were examined. **Chapter 6** describes a multiple case study conducted to qualitatively explore changes made in two disability service organisations for residents with intellectual disabilities and challenging behaviours over a 3-year period. We analysed focus group reports, multidisciplinary meeting records and organisational documents and used ecological theory as the main sensitising frame. A summary and reflection on the main findings and theoretical and methodological issues are presented in **Chapter 7**. Recommendations for national and organisational policies and implications for support services and future research are also addressed.

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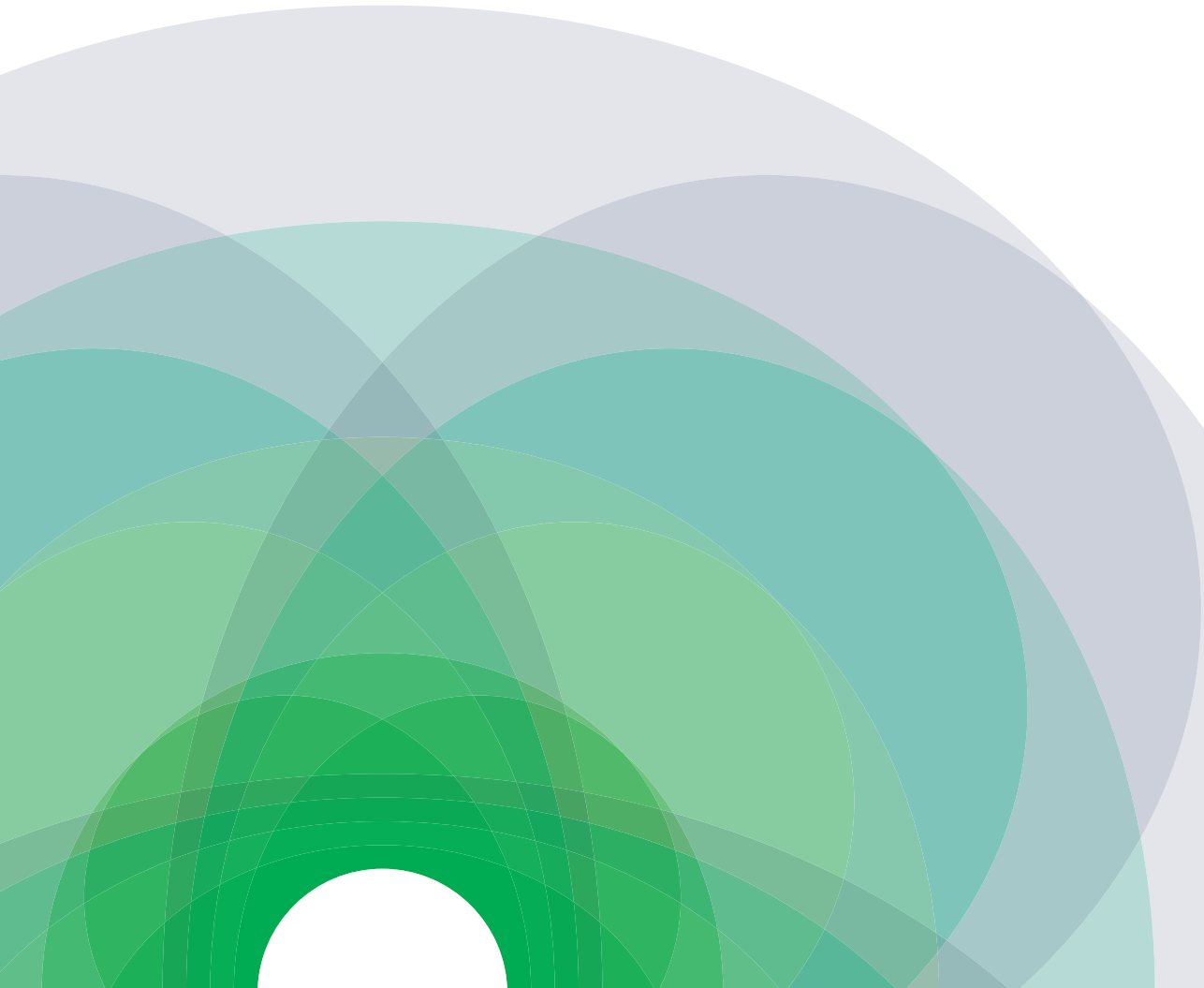

Chapter 2

Organisational environment and challenging behaviour in services for people with intellectual disabilities: A review of the literature.

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ABSTRACT

Background

This literature review explores the relationship between the organisational environment of residential disability services and challenging behaviour in in people with intellectual disabilities using Bronfenbrenner's ecological theory as a theoretical framework.

Method

Literature published between 2000–2016 was retrieved, using a scoping study with the search terms 'intellectual disability', 'challenging behaviour', and 'organisation'.

Results

At all layers of Bronfenbrenner's ecological theory, relationships were identified. Organisational aspects affect staff and residents with intellectual disabilities and challenging behaviour ranging from overall disability policy and budget systems (macrosystem), to organisational philosophy, leadership, power structure, staff coaching and working methods (exosystem), to staff beliefs and attitudes (microsystem) and client characteristics (ontosystem).

Conclusions

The use of an ecological model for residents with intellectual disabilities and challenging behaviour helps to identify organisational environment aspects that influence challenging behaviour in residents with intellectual disabilities. Understanding organisational environments in terms of their ecology enhances evidence-based provision of quality supports to this population.

Resumé

Contexte. Exploration bibliographique sur la question de la relation entre facteurs organisationnels et comportements-défis au sein des services pour personnes atteintes d'une déficience intellectuelle.

Méthode. Des publications entre 2000 et 2016 ont été examinées à partir de mots-clés dont déficience intellectuelle, comportements-défis, besoins spéciaux, organisation, service. Les résultats ont été classifiés et interprétés suivant le modèle écologique de Bronfen brenner.

Résultats. Des facilitateurs et des barrières ont été identifiés à chaque niveau du modèle. Les facteurs d'organisation les plus importants sont : le modèle de leadership, les méthodes de travail du personnel d'accompagnement et la gestion du service.

Conclusion. Le modèle écologique est utile pour comprendre les relations entre des comportements-défis d'utilisateurs et l'organisation d'un service, et peut contribuer à la qualité des services comme à la qualité de vie des personnes concernées.

2.1. INTRODUCTION

About 5–15% of people with intellectual disabilities display challenging behaviour (Emerson, 2001; Hamlin & Oakes, 2008; Hensel, Lunsky, & Dewa, 2014). Challenging behaviour includes physical and verbal aggression, problematic sexual behaviour, self-injury, destructiveness, and stereotypical behaviour. These behaviours are often of such intensity, frequency, and duration that they pose a safety risk and threaten the quality of life of the person, other service users with intellectual disabilities, as well as people in their support systems (Allen *et al.*, 2005; Allen, Lowe, Moore, & Brophy, 2007; Emerson, 2001; Dilworth, Philips, & Rose, 2011). Furthermore, most support services for people with intellectual disabilities and challenging behaviour are associated with high rates of restraint, seclusion and medication, and physical abuse of and by people with intellectual disabilities and challenging behaviour (Allen *et al.*, 2005; Allen, *et al.*, 2007; Emerson, 2001).

It may not be excluded that the organisational environment of support services influences challenging behaviour in people with intellectual disabilities, and conversely, that challenging behaviour affects the organisational environment (Dilworth *et al.*, 2011). The organisational environment of support services for people with intellectual disabilities and challenging behaviour needs clear operational policies and working methods, a concentration of relevant expertise, and a collective identity to help staff to be more tolerant and better equipped to cope with these challenges (Felce *et al.*, 1998). Challenging behaviour, causing damage and injury, are reported in these support services, leading to special building requirements, i.e. protected equipment and restrictions of access to parts of the buildings (Allen *et al.*, 2007). It is also reported that these people often reside in impoverished settings (Allen *et al.*, 2005; Emerson, 2001).

It is now widely accepted that 'intellectual disabilities' and 'challenging behaviour' are interactional, ecological constructs, rather than strictly internal deficits or traits of the person. They should be understood as resulting from complex interactions between individuals and their environments (American Psychiatric Association [APA], 2013; Hamlin & Oakes, 2008; Dilworth *et al.*, 2011; Schalock *et al.*, 2010; Tossebro et al., 2012; Wehmeyer, *et al.*, 2008). Since environments, including organisational environments of services for people with intellectual disabilities, are complex in itself, it might be helpful to use a theoretical framework which takes this complexity into consideration. Knowledge about the relationships between the organisational environment and challenging behaviour may be useful to promote effective support services as well for research purposes. In the present study, the authors report on a search of the literature to identify and clarify these relationships. The ecological theory of human development and functioning proposed by Uri Bronfenbrenner, was used as a framework to analyse and discuss findings. In the literature, Bronfenbrenner's theory is referred to as 'bioecological theory', 'socio-ecological theory' and more recently as 'Process-Person-Context-Time model' (Bronfenbrenner & Morris, 2006; Griffore & Phenice, 2016). In this article, we use the term 'ecological theory', and it will be briefly presented.

Bronfenbrenner (1979, 1994, 1999; Absil, Vandoorne, & Demarteau, 2012; Bronfenbrenner & Morris, 2006) states that individual human functioning and development are the results of complex reciprocal interactions between an active, bio-psychologically developing person (the ontosystem) and the environment, which is conceived as four nested 'layers': micro-, meso-, exo-, and macrosystem. Each of these four systems consists of persons, objects, and symbols. These systems are interrelated, and dynamic. First, the person and their environment are seen as mutually interacting and influencing each other through proximal processes. These are characterised by person–person interactions (dyads) the individual is engaged in. Second, person, environments and interactions change over time. This temporal aspect of these systems constitute an extra ecological element: the chronosystem (Bronfenbrenner, 1979, 1994, 1999; Bronfenbrenner & Morris, 2006; Tudge, Mokrova, Hatfield, & Karnik, 2009). The ecological model can be represented as a nested set of four ecological systems surrounding the person with its biopsychological constitution, as is shown in Fig. 1, in which the temporal dimension of these systems is visualised as an arrow (*Institut national de la santé et de la recherche médicale* [INSERM], 2016, p. 982).

The ontosystem consists of personal biological (genetic and physical) dispositions and psychological characteristics (skills, character, experiences) (Bronfenbrenner & Morris, 2006; Tudge *et al.*, 2009). The microsystem consists of activities, social roles, and interpersonal relations in face-to-face settings (i.e. family, school), including interactions of residents with intellectual disabilities and challenging behaviour with staff or family members. Note that a person is engaged in more microsystems. The mesosystem refers to the interactive connections among different microsystems; for example, between family members and group home staff, or between staff members mutually, or between staff member and the person's teacher. The exosystem encompasses relationships between a residents' microsystem and proximate elements, so a resident does not interact directly with the exosystem but what happens or is decided here affects the microsystem and subsequently the resident. For example, managers who do not have direct contact with residents but interact directly with staff, such as, higher management of the service organisation, human resources management and facilitating services. The macrosystem consists of the all-encompassing patterns of rules, funding systems, and attitudes that are shared in the micro-, meso-, and exosystems, and are characteristics of a culture. It contains, for example, belief systems, customs, financial resources, governmental structures, and budget allocation systems. The chronosystem can, for example, relate to the changing of the person, and changes in the interaction between staff member and resident (microsystem) as a result of staff turnover, or developments in the organisational vision or structure (exosystem) (Bronfenbrenner & Morris, 2006; Tudge *et al.*, 2009).

In most cases, support services for a person with intellectual disabilities and challenging behaviour (*ontosystem*) depend on collective funding and national disability policies (*macrosystem*), which are essential for facilitating the service organisations (*exosystem*) in order to organise sufficient and qualified staff who directly interact with residents on day-to-day and face-to-face bases (*microsystem*) (Allen *et al.*, 2005; Guerrero, He, Kim, & Aarons, 2014; Svab & Tomori,

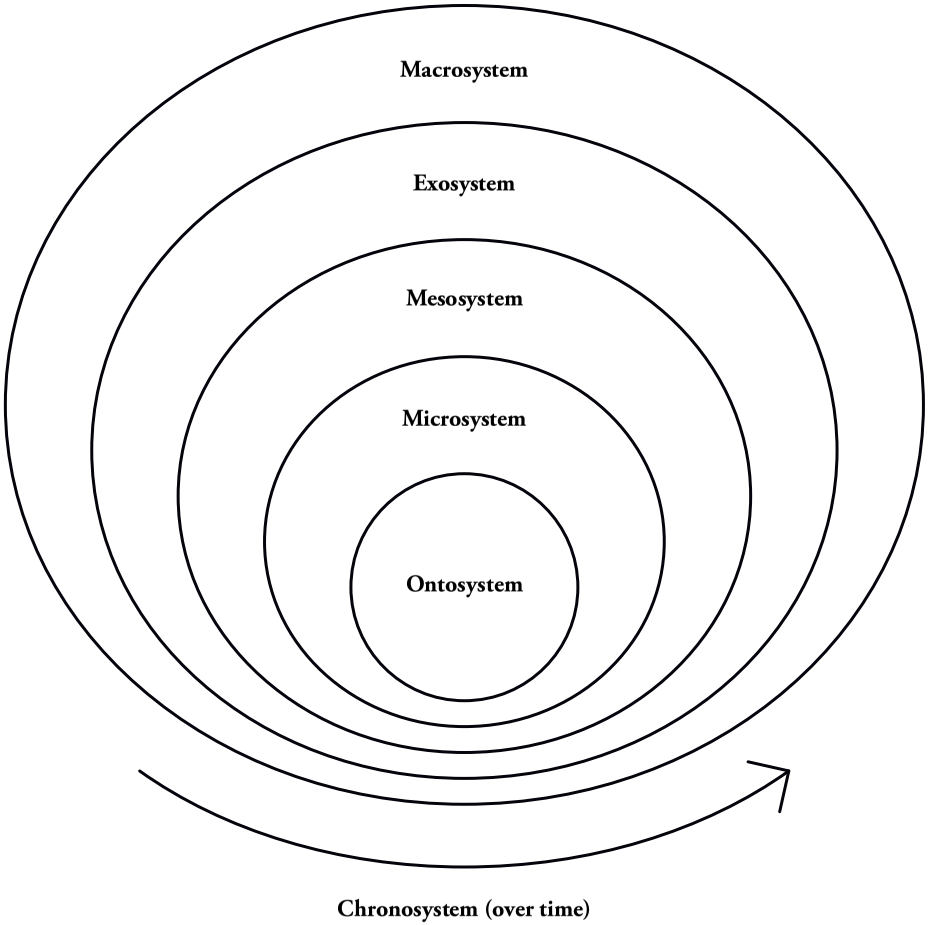

Figure. 1. Ecological model developed by Bronfenbrenner (1979, 1994, 1999; Bronfenbrenner & Morris, 2006) and adapted by INSERM (2016, p. 982).

2002). Other organisational environment aspects, such as physical design and organisational structures, may also exert influences, but they have received less research attention (Hulgin, 2004). Residents participate in more microsystems such as their family or work settings, and the interactions between these microsystems constitute the *mesosystem.* Changes and development in time in these systems constitute the *chronosystem*.

The aims of the present study were to explore the literature on the relationship between disability service organisations and challenging behaviour in residents with intellectual disabilities, and to identify aspects and interactions between these aspects that may be important in the understanding of this relationship. According to Bronfenbrenner's ecological theory, the organisational environment (exosystem) strongly affects the microsystem and the person within. Thus, this literature review sought to determine the influences or roles of different aspects of the organisational environment on challenging behaviour in residents with intellectual disabilities.

2.2. METHOD

To explore the relationship between the organisational environment and challenging behaviour in residents with intellectual disabilities, we used a scoping study, which is a type of literature review. A scoping study is a method for mapping key concepts within a research area, sources for literature and the different evidence, and is often used when prior studies have not reviewed a certain area (Arksey & O'Malley, 2005).

Search strategy

This scoping study was conducted using three search strategies. First, we used a combination of the three search terms (e.g. intellectual disability, challenging behaviour, organisation), which generated too little studies to conduct an analysis. So, we used two combinations of search terms 'intellectual disability' with 'challenging behaviour', and the combination 'intellectual disability' with 'organisation' and their synonyms and MeSH terms, using search engines Medline, PiCarta Online Contents, ScienceDirect, ERIC, and SpringerLink. The second strategy was an additional search of the contents of the *Journal of Applied Research in Intellectual Disabilities*, the *Journal of Intellectual Disability Research*, the *Journal of Policy and Practice in Intellectual Disabilities*, and journals of the American Association of Intellectual and Developmental Disabilities ([AAIDD]; *American Journal of Intellectual and Developmental Disabilities*, *Intellectual and Developmental Disabilities*, and *Inclusion*), using the search terms 'challenging behaviour' and 'organisation'. The third strategy was the 'snowball method', exploring references cited in included articles of the first two search strategies.

Study selection

Articles included in this study were original research reports, literature reviews, and case studies, and published in English from 2000 to 2016. Search criteria included participants who received

support services including living arrangements in a group or residential setting for children or adults with intellectual disabilities and challenging behaviour. Articles were excluded if they were studies into prevalence, comorbidity, medication, clinical therapy, diagnostics, or medically and neurologically oriented. The next step was the examination of the abstracts of the included articles to determine eligibility for inclusion in the analysis, based on whether the articles addressed organisational aspects with respect to challenging behaviour in residents with intellectual disabilities, sometimes mediated by staff, or the relationship between the macrosystem and disability service organisations. The final step was conducting an in-depth analysis of each article by two researchers, and charting of the data of all articles included in this scoping study by summarising the information on the relationship between challenging behaviour and organisational aspects, and analysing results using the ecological framework.

The first search strategy of this scoping study, using the combination 'intellectual disability' with 'challenging behaviour', resulted in 1850 hits and 39 potentially eligible articles, and the combination 'intellectual disability' with 'organisation' resulted in 112 hits and 19 potentially eligible articles. After an examination of the 39 and 19 titles, we found 7 articles which were part of both search combinations, resulting in 51 included articles based on title. Subsequently, the abstracts of these 51 articles were examined, resulting in 7 articles, which were included in the in-depth analysis. The second search strategy yielded the following: *Journal of Applied Research in Intellectual Disabilities*, 404 hits and 8 included articles; *Journal of Intellectual Disability Research*, 551 hits and 4 included articles; *Journal of Policy and Practice in Intellectual Disabilities*, 197 hits and 1 included article; and AAIDD journals, 391 hits and 4 included articles. This second search strategy led to the inclusion based on abstract of an additional 17 articles. Thirdly, the application of the 'snowball method' led to the inclusion of 4 additional articles. Thus, the scoping study included a total of 28 articles, which were examined in the in-depth analysis (see Table 1 for an overview of the results).

Charting the results

To chart the 28 articles, we used a descriptive-analytical method (Arksey & O'Malley, 2005). We collected standard information about the articles, such as aim, key words, design and methods, and conclusions, and used Bronfenbrenner's ecological theory as an analytic framework to critically organise the diverse studied factors of the 28 articles in accordance with their association with the systems of the theoretical framework, and in order to analyse the factors and the interrelations between these factors (Arksey & O'Malley, 2005).

2.3. RESULTS

The results of this scoping study are charted according to the ecological theory of Bronfenbrenner in Fig. 2, and discussed accordingly below.

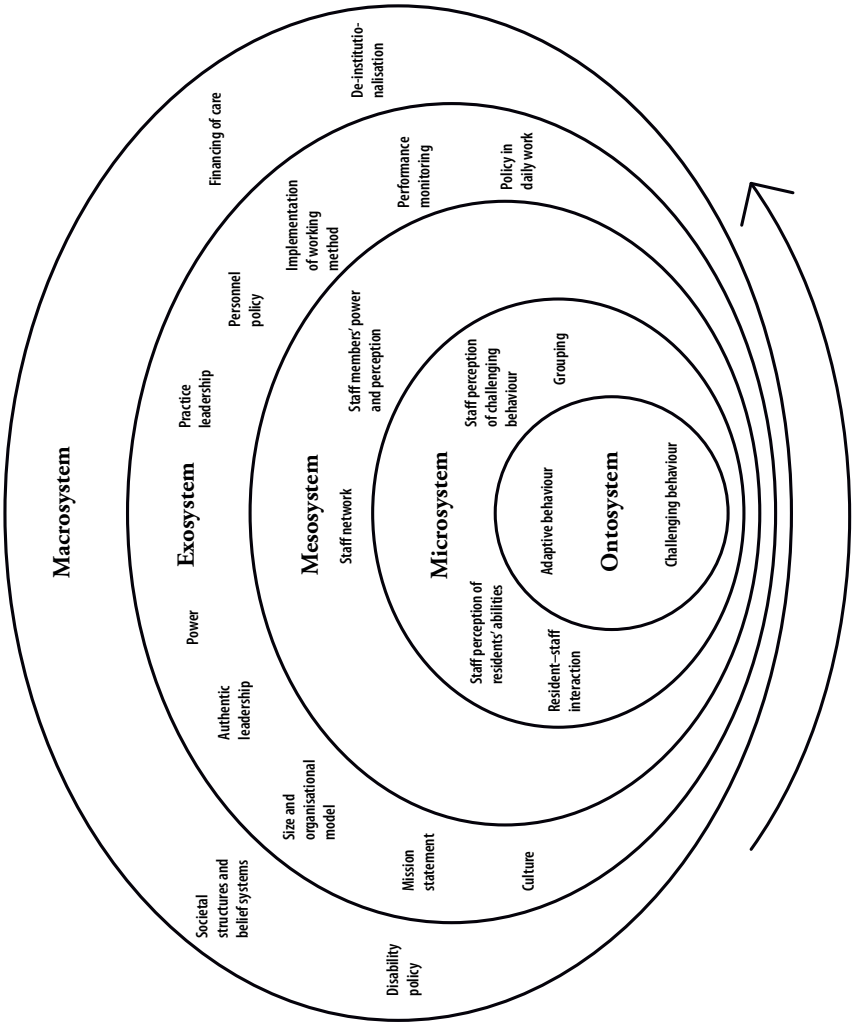

Figure 2. Ecological model of organisational environmental factors in relation to the functioning of people with intellectual disabilities and challenging behaviour.

Ontosystem

The level of adaptive behaviour of residents seems to be associated with the quality and outcome of received support, and is not linked to the quantity of the provided support (Beadle-Brown *et al.*, 2015; Felce *et al.*, 2002; Felce & Perry, 2004). For example, moreable residents in combination with staff who had worked in hospitals and had knowledge of challenging behaviour and Active Support as a working method, results in higher quality supports (Beadle-Brown *et al.*, 2014; Mansell, *et al.,* 2008).

Challenging behaviour in residents with intellectual disabilities is associated with lesser quality and quantity of support services. Many children with intellectual disabilities and challenging behaviour are labelled with a mental disorder, resulting in lower support quality since regular services for residents with intellectual disabilities are not well equipped for residents with mental disorders, and vice versa (Surjus & Campos, 2014). In addition, community placement in a small group home is often unsuccessful for residents with intellectual disabilities and sexually inappropriate behaviour, because of their specific and complex behaviours plus the lack of adequate professional support for staff, and insufficient resources and qualified staff (Broadhurst & Mansell, 2007; Mansell *et al.*, 2002).

In summary, at the level of the ontosystem negative associations are seen between the availability and the quality of support services and residents characteristics, such as lower levels of adaptive behaviour and presence of challenging behaviour. Furthermore, lack of qualified staff and weak support of direct support staff by the organisation of staff present risks for the quality of support for residents with intellectual disabilities and challenging behaviour.

Microsystem

Staff members' perceptions of residents influence staff performance (White *et al.*, 2003). For example, low-performing group homes with less community activities for residents tend to have staff who regard residents as different and prioritise staff's interests over residents' interests. These staff members also feel isolated from the rest of the organisation (Bigby, *et al.*, 2012; Bigby, *et al.*, 2015; Gillett & Stenfert-Kroese, 2003). In contrast, in higher-performing group homes with respect to quality of life outcomes for residents, staff members have emotional bonds with their residents, who are regarded as being 'like us' (i.e. they have ordinary lives, need human company), which is promoted by, for example, an experienced staff member who is always present to teach and monitor staff members (Bigby *et al.*, 2015).

Repetitive threat and exposure to aggression affects staff members' perceptions of challenging behaviour. Threat and exposure can have negative psychological consequences for staff, resulting in less intense or less appropriate support. Consequences for support quality were less when staff had little fear of violence, were exposed to less-severe aggression on a daily basis, recovered rapidly, and viewed exposure to such situations as part of the job. Nonetheless, managers need to pay attention to the subjective experience of direct support staff and provide substantial support to staff (Dilworth *et al.*, 2011; Hensel *et al.*, 2014). Secondly, Dilworth and colleagues (2011)

concluded that staff members rated residents' control of their challenging behaviour as less problematic in settings in which staff displayed positive attitudes toward residents, exosystem aspects such as the physical and social environments were appropriate, and the support service seemed to be properly structured (Dilworth *et al.*, 2011).

Positive interaction between staff and residents with challenging behaviour leading to decreasing challenging behaviour incidents is enhanced through feedback from a coach, and by the presence of an organisational philosophy, which states to whom staff are managerially accountable and defines the roles of different involved professionals (Courtemanche *et al.*, 2014; Sutton, *et al.*, 2016). The amount of contact between residents and staff members is furthermore associated with good allocation of staff, coaching by managers, and more experienced staff, and was not linked to more staff, a greater presence of key workers, and residence size (Beadle-Brown *et al.*, 2015; Felce *et al.*, 2002).

The diversity of residents' needs is greater in more heterogeneous groups, and therefore they need staff with more specialised skills. However, residents receive less support and staff performance is inefficient because of more time spent on planning and management of residents' activities (Mansell *et al.*, 2002). More homogeneous groups with many residents with challenging behaviour are associated with reduced staff diversity and educational level. Also, residents are at greater risk of abuse by staff members (Felce *et al.*, 2002; White *et al.*, 2003).

At the level of the microsystem, it may be concluded that staff's perceptions of residents' abilities and behaviour influences the quality of interactions between staff and residents, and therefore the quality of support services. These perceptions of staff are facilitated by staff's sense of being embedded in the organisation and being supported by a suitable and structured organisational environment (for example support from coaches and managers). Literature is inconclusive about heterogeneous and homogeneous grouping of residents, both can be associated with negative residents outcomes. In the present review, no studies were found which examined the relationships between specific disorders, such as autism or attention deficit hyperactivity disorder, and the organisation of support services.

Mesosystem

The least researched topic appears to be the mesosystem. The network of staff members and differences in power and perceptions between staff members mutually are the only aspects of the mesosystem in the literature. So, interactions of different microsystems of the resident with intellectual disabilities and challenging behaviour are indistinct. However, from an ecological perspective and from the perspective of the availability of support resources, interactions between staff members and other microsystems of residents with intellectual disabilities such as family, school, work and leisure environments are highly relevant.

The literature shows that, power dynamics influence the relationships among staff members. For example, cliques of staff members can have their own ways of working and exclude external involvement from others outside the clique with respect to improving the quality of life of their

residents (Bigby *et al.*, 2015; Gillett & Stenfert-Kroese, 2003). To avoid problematic relationships between staff and residents, which might result in challenging behaviour, staff members must set boundaries between personal and professional relationships within their networks (White *et al.*, 2003). The quality of the supports is also associated with differences between staff members in whether they are positive about choice and inclusion of residents with severe ID. Thus, coaching and modelling of the different attitudes between staff members for example by a manager, is necessary (Beadle-Brown *et al.*, 2015; Bigby, Clement, Mansell, & Beadle-Brown, 2009; White *et al.*, 2003).

Exosystem

The exosystem refers to aspects, such as leadership, mission statement, power, culture, personnel policy, performance monitoring, and implementation of working methods (such as Active Support). At the exosystem level, staff practices and organisational issues are distinguished to help chart evidence from the literature.

Exosystem – staff practice

The implementation of national policies in support organisations for residents with intellectual disabilities appears not to be easy, as can be seen in the United Kingdom, where specific guidelines were formulated to systematically express the meanings and applications of national policies for daily work practices (Bigby *et al.*, 2009). The assessment of staffs' values, attitudes, and skills with respect to policy goals and values during, for example, recruitment and training is necessary, as well as creating safe spaces within organisations for staff members to discuss attitudes and examples of good support practices in line with policy values (Bigby *et al.*, 2009, 2015; Walker, 2012; White *et al.*, 2003).

The implementation of a working support or treatment method for challenging behaviour is hindered by lack of resources and passive leadership of managers. Implementation is associated with staff's attitudes, type of working method, feedback, and practice leadership (Beadle-Brown *et al.*, 2014; Beadle-Brown *et al.*, 2015; Courtemanche *et al.*, 2014; Guerrero *et al.*, 2014). Effective and efficient implementation of working methods is linked to aspects, such as experiential learning, and the presence of more qualified staff, who evaluate and discuss their tasks, which results in better interaction between staff and residents as well as with managers (Deveau & McGill, 2016; Mansell *et al.*, 2008). Hulgin (2004) states that different organisational types are associated with different obstacles and strengths with respect to the implementation of a new working method.

Performance is frequently monitored in order to develop new support practices by staff, this is done by managers and in accordance with organisational values and goals. (Deveau & McGill, 2016). Performance monitoring in successful support services for residents with intellectual disabilities and challenging behaviour is associated with written intervention strategies, regular reviews of daily practice, and involvement of other professionals (Broadhurst & Mansell, 2007). Successful services also seem to have clear roles and responsibilities, managerial support, good

team structure and cohesion, and integrated care (Broadhurst & Mansell, 2007; Hensel *et al.*, 2014; Sutton *et al.*, 2016). When support practices are not monitored and become isolated, the risk of low-quality care increases, because staff members become inaccessible and resistant to advice from others in the organisation or external involvement (Sutton *et al.*, 2016; White *et al.*, 2003).

In summary, at the level of staff practice in the exosystem, the organisation needs to implement policies and working methods in the hectic daily practices of supporting residents with intellectual disabilities and challenging behaviour. Staff performances are monitored by the organisation during different organisational activities, and is enhanced by coaching staff and stimulating reflective discussions. So the supportive and facilitating role of the manager is vital in coaching staff.

Exosystem – organisational aspects

Practice leadership.

Frontline managers have a high impact on daily support practices for residents with intellectual disabilities and challenging behaviour, and are mediators of organisational conditions, which are set outside the microsystem of reciprocal interactions between staff and residents. The frontline manager shows practice leadership by setting appropriate standards, offering feedback on 'bad practices' and attitudes with respect to incidents related to challenging behaviour, and by providing teams with coaching and structure. For staff, these managers define jobs, mediate stresses, create values, and establish well-functioning working environments (Deveau & McGill, 2016; Beadle-Brown *et al.*, 2015; White *et al.*, 2003; Wooderson, Cuskelly, & Meyer, 2016). Therefore, managers must have sufficient time to monitor and offer guidance in daily practice (White *et al.*, 2003). Frontline managers furthermore must combine the informal, interactional aspects of their leadership role with the more formal and bureaucratic aspects of an organisational context (Bigby *et al.*, 2015; Deveau & McGill, 2016). In summary, frontline managers should act as buffers and facilitators between support and treatment requirements, managerial demands from the organisation, and the vicissitudes of daily practice.

Authentic leadership.

Authentic leadership of higher management and the board is characterised by a passion for providing high-quality services to residents with intellectual disabilities, awareness of values in the field of ID, and transparent and authentic behaviour in accordance with the mission statement (Thompson Brady, Fong, Waninger, & Eidelman, 2009). Thompson Brady and colleagues (2009) conceptualise it as a dynamic process between leaders and followers, i.e. leaders inspire others to identify with them and the organisation, link their emotions to those of their followers, support self-determination, and activate positive social exchanges (Thompson Brady, *et al.*, 2009).

Mission statements.

A strong, authentic organisational mission statement stimulates, shapes and reinforces staff's behaviour and attitudes, as is the development and consistent implementation of organisational procedures to monitor and direct staff behaviour (Bigby *et al.*, 2012; Bigby *et al.*, 2015; Walker, 2012). Bigby and colleagues (2015) demonstrated the tension between an orientation programme for new staff focused on values as stated in a mission statement, i.e. positive attitude towards residents with intellectual disabilities, and an introductory programme focused on procedures, i.e. focused on risk management. This orientation programme and risk management are difficult for staff to combine when supporting residents with challenging behaviour and helping them to achieve goals, which sometimes involves risk taking to let residents experiment with new behaviours. A more effective orientation of the organisation (i.e. to achieve increased family involvement) is developed by regular reflection on processes and outcomes in practice within the organisation and with national best practice support services (Walker, 2012).

Personnel policy.

Personnel policy consists of clearly formulated requirements and demands with respect to staff's knowledge and skills, and clear descriptions for staff of the supported population and the resident characteristics of people with intellectual disabilities and challenging behaviour. A clear policy, which is incorporated in structures and processes of group homes, stimulates a positive culture (Bigby *et al.*, 2015; Li *et al.*, 2011). Staff should be informed about 'what to expect' and 'what is expected from them' in order to enhance realistic expectations about their job. Personnel policy (i.e. adequate staff support structures, compensation, autonomy) is associated with job satisfaction, which can be predicted by the organisational model and staff members' characteristics, such as age and educational level (Chou, Kroger, & Lee, 2010). A lack of job satisfaction is furthermore linked to the organisational climate, and can complicate team functioning, and prevent staff from identifying residents' needs while displaying challenging behaviour (Sutton *et al.*, 2016). In contrast, properly functioning teams are associated with greater senses of teamwork, leadership, and personal involvement with residents and the given support (Walker, 2012; White *et al.*, 2003).

Power.

White and colleagues (2003) conceptualise power as a construct that can be out of balance within the hierarchy of a service organisation. This imbalance is reflected in the use of force to control others or to actively promote oneself as an authority figure, even in the absence of the required experience. For example, staff members who feel powerless or less fit for their tasks may resort to the exertion of power over residents with challenging behaviour, who in turn may seek to regain control by abusing fellow residents. Another example is imbalance in the relationship between staff and management, consisting of misunderstanding and inconsistent decision making (Sutton *et al.*, 2016; White *et al.*, 2003).

Culture.

Culture is a key factor affecting staff members' behaviour and residents' quality of life (Bigby *et al.*, 2012; Felce *et al.*, 2002; White *et al.*, 2003). Bigby and colleagues (2012; Bigby *et al.*, 2015) identified five dimensions of group home cultures for residents with intellectual disabilities: (1) alignment of powerholders' values, (2) regard for residents, (3) perceived purpose, (4) working practices, and (5) orientation to change and innovative ideas. Longevity of staff helps to perpetuate the culture, which can lead to the sustainment of a negative culture, but it can also positively buffer the effects of a stressful work environment, as is the case with incidents of challenging behaviour. A more negative organisational culture with oppositional, competitive, and perfectionistic elements is associated negatively with job satisfaction and employee wellbeing (Bigby *et al.*, 2015; Gillett & Stenfert-Kroese, 2003; White *et al.*, 2003). Poor service conditions and organisational design, and poor placement procedures for residents with challenging behaviour are associated with a declining organisational culture. Such a culture tends to be linked to an authoritarian management style, less focus on residents and more social pressure on staff members to control the behaviours of residents (White *et al.*, 2003).

Size and organisational model.

Research shows that the number of years a particular service setting exists, is linked to a larger size of the setting and fewer staff hours per resident. An increased orientation towards residents is, however, related to the greater presence of key workers and better organised working methods (Felce & Perry, 2004). The size of the residential model (e.g. group home with less then 6 residents, small residential home with less then 50 residents, or institution with more then 50 residents) and the organisational status (e.g. statutory, voluntary, or private sector) are linked to job satisfaction (Chou *et al.*, 2010). In the United Kingdom though, the organisational status showed marginal variation in staffing, internal organisation, and milieu when residents' abilities were taken into account (Felce *et al.*, 2002).

In summary, at the level of organisational aspects, personnel policy and mission statements give direction to staff's activities and attitudes, while supporting residents with intellectual disabilities and challenging behaviour. Guidance for staff should not only be written down, but also visible in the leadership styles of frontline and higher managers and the CEO. Within the organisational hierarchy, balanced power relations also result in a more appropriate organisational environment. Organisational culture, if positive and not authoritarian, helps staff to support residents according to their needs and to prioritise their work activities. The organisational model seems less of influence on the support of challenging behaviour in residents with intellectual disabilities.

Macrosystem

Macrosystem consists of the all-encompassing patterns of rules, belief systems and attitudes that are shared in the micro-, meso-, and exosystems, and are characteristics of a culture. Most western countries have successfully reduced the number of persons with intellectual disabilities

in institutions if not closed residential institutions and state-run long-stay psychiatric hospitals with generally positive outcomes (Bigby, 2006; Surjus & Campos, 2014; Svab & Tomori, 2002). Nonetheless, deinstitutionalisation has also led to the fragmentation of service provision to residents with intellectual disabilities, and reduction of the impact of specialised training in ID in some of the countries. This situation complicates access to as well as the quality of support services for residents with challenging behaviour (Felce *et al.*, 2002; Mansell *et al.*, 2002; Surjus & Campos, 2014).

The strengthening of individual consumer rights is supported by the United Nations Convention on the Rights of People with Disabilities as well as by certain national disability policies, such as the Americans with Disabilities Act, which is promoting goals such as economic self-sufficiency, equal opportunity, full participation, and independent living (Thompson Brady, *et al.,* 2009; Tossebro *et al.*, 2012). Residents with challenging behaviours, however, are significantly more challenged to participate in society and need more intense and facilitation of these supports, which is not an easy task for any national policy. However, if these special needs are not met adequately, it may even increase challenging behaviours in people with intellectual disabilities.

Different welfare states are restructuring their systems in order to reduce collective commitments to vulnerable populations. They shift from standard to flexible and diverse services, foster a more explicit role of informal care systems, and integrate economic and social criteria for services (Surjus& Campos, 2014; Svab & Tomori, 2002). In the 1990s, most Scandinavian countries made local governments fully responsible for support services for residents with intellectual disabilities, resulting in the development of more generic services under the responsibility of local authorities (Tossebro *et al.*, 2012). Changes in the way disability service organisations are funded, have consequences for organisational resources and the quality of care (Broadhurst & Mansell, 2007; Guerrero, *et al.*, 2014; Sutton, *et al.*, 2016). The heterogeneity of organisations within countries is reduced by standardisation of organisational solutions by benchmarking, which tends to focus on less expensive services through cost-reduction (Tossebro, *et al.*, 2012).

Drivers of change in policies and disability service organisations consists of media attention (for example, scandals involving extreme challenging behaviours and restrictive or failing supports), specific government actions, the demonstration of local best practices, and the strengthening of the ideology of normalisation (Tossebro, *et al.*, 2012). For example, a strategy was formed after public pressure in England, resulting in the development of a National Service Framework with national standards for delivery and monitoring of mental health services for residents with challenging behaviour, in combination with a large investment by the government (Surjus & Campos, 2014; Svab & Tomori, 2002).

In summary, the macrosystem (i.e. policies, budgeting and belief systems regarding people with intellectual disabilities) exert considerable influences on support service organisations predominately without specific guidelines with respect to residents with challenging behaviour. There is no specific attention found in the literature at the level of the macrosystem regarding people with intellectual disabilities and challenging behaviour.

Chronosystem

The chronosystem reflects the temporality of the ecological systems, such as changes in the manner support services are provided and how residents with intellectual disabilities and challenging behaviour are grouped, based on changing national policies and belief systems. Tossebro and colleagues (2012) and Svab & Tomori (2002) observed different trends over time in support services for people with intellectual disabilities occurring at different paces in different countries, including inequality across municipalities and resident populations, marketization, new public management, and the (re)emergence of larger group homes. For example, deinstitutionalisation in Norway began with the establishment of small group homes (n = 4 by 1990), which evolved into larger groups (n = 7 by 2010) and grew gradually towards clustered settings of approximately 25 residents with intellectual disabilities or challenging behaviour or elderly residents (Tossebro, *et al.*, 2012). The rationales behind this development were the cost-saving potential of larger settings, provision of more professional care, staff stability, and reduction of residents' loneliness. However, research has not confirmed the effectiveness of the rationales of staff stability and reduction of loneliness (Tossebro, *et al.*, 2012).

Interrelations of aspects of the ecological systems

According to ecological theory, the onto-, micro-, meso-, exo- and macrosystems are interrelated. It is concluded that only 7 of the 28 studies included in the review studied more than two ecological systems, focusing mainly on various combinations of the onto-, micro-, and exosystem (Beadle-Brown, Mansell, Ashman, Ockenden, Iles, & Whelton, 2014; Beadle-Brown, Bigby, & Bould, 2015; Felce, Lowe, & Jones, 2002; Dilworth, *et al.*, 2011). Two studies focused primarily on the macrosystem (Mansell, Ashman, Macdonald, & Beadle-Brown, 2002; Surjus & Campos, 2014), and one explored the micro-, meso-, and exosystems (White, *et al.* 2003). Organisational environment aspects, such as physical design and organisational structure of settings and services influence different system levels of the ecological model, but they have received less research attention (Hulgin, 2004). From the studies collected in our search, some patterns do emerge. First, positive interactions between staff members and residents are linked to a clear organisational philosophy, the use of a working method that is congruent with staff attitudes and skills, coaching, availability of resources, and managerial leadership. Second, unfavourable factors for staff-residents' interactions are associated with teams being isolated from the organisation and imbalanced power structures, resulting in diminishing involvement and support from others outside the team, which is essential in support services for people with challenging behaviour. Third, values and attitudes of staff are formed by organisational and national policies and belief systems. Fourth, staff values and attitudes are affected by a proper physical and social environment and by the service structure, which in turn is linked to a positive organisational culture if sufficient staffing is available. It can be concluded that a number of aspects are interrelated, however the relative impact of the different aspects on each other and the directions of the influences are not always clear.

2.4. DISCUSSION

The present literature review, using a scoping study, identified various forms of relationships between organisational aspects and residents with intellectual disabilities and challenging behaviour. These relationships were analysed using the ecological systems and their interrelatedness of Bronfenbrenner's theory.

Ecological model

This literature review demonstrates that ecological theory can be used for analysing relevant information with respect to the role of organisational environments of support services for residents with intellectual disabilities and challenging behaviour. Ecological research on the interaction between challenging behaviour in residents with intellectual disabilities and the organisational environment is scarce. This may be related to the fact that support for people with intellectual disabilities and challenging behaviour is more focused on specific treatment or issues which require specialised clinical knowledge instead of a focus on the organisational setting.

At the ontosystem level of the ecological model, the level of adaptive behaviour and the presence of challenging behaviour are associated with access to and the quality of support services. For example, sexually inappropriate behaviour may come with challenges for staff and organisational resources, so it is perceived as difficult to manage and puts pressure on the quality of support and hence may lead to denial of access to a particular support service (Broadhurst & Mansell, 2007; Dilworth *et al.*, 2011). At the level of the microsystem, adequate daily interactions between residents and staff members are affected by a complex combination of staff perceptions and beliefs, the philosophy of the service, experience and qualifications of staff, and leadership qualities of the management. For example, if staff is not appropriately coached, they may be insecure of how to cope with residents, resulting in more incidents related to challenging behaviour (Walker, 2012; White *et al.*, 2003). The least researched topic is the mesosystem: the significance of interactions among different microsystems therefore remains unclear. Nonetheless, Bronfenbrenner's model suggests that positive relationships between the resident's family (and other persons involved in direct contact with the resident in e.g. a school or work setting) and staff members play a favourable role in creating positive conditions for supporting the resident.

Results at the exosystem level of the present review (Section 3.4) show that there are many factors with respect to the understanding of the organisational environment of support services for people with intellectual disabilities and challenging behaviour. This system is highly relevant but also complex for several reasons. First, the organisational environment consists of a wide variety of aspects, and relationships between these aspects are not often studied. Second, the structure and policies of an organisation, such as the power structure and leadership, as well as cultural issues seem important factors to facilitate support for residents with intellectual disabilities and challenging behaviour. However, these aspects are difficult to manage, because they often are formulated in general terms and are difficult to operationalise. At the macrosystem

level in which support service organisations are embedded, overarching socio-political values and budget systems can pose efficacy risks for organisations. With regard to the chronosystem, alterations in support services should be evident at all levels. Ontosystem factors such as aging of the person, changes in (mental) health conditions, and treatment effects can be examples of time related factors, which influence the relationship of people with intellectual disabilities and challenging behaviour and their support system. At the microsystem level, staff turnover and team changes are known to be potential risk factors for the quality of support and for staff's work satisfaction (Buntinx, 2008). At the exo- and macrosystem level, changes in socio-political principles underlying the structure and budget system are temporal factors, which should be considered in the understanding of support effectiveness. However, not all of these factors were recognised in the results of the present literature study or the temporality is indistinct.

Organisational environment and challenging behaviour

The following organisational aspects, as seen in this study, seem to be of importance in support services for residents with intellectual disabilities and challenging behaviour: committed leadership and management, balance of power in the organisational hierarchy, and a clear, authentic mission statement. For example, staff needs clear directions from the organisation's mission statement and congruent coaching from managers in order to know how to respond to challenging behaviour. Well-structured teams with clear roles and responsibilities for staff, good communication and coaching from frontline managers and relevant experts are also essential in these support services. This relates to a transparent working environment in which the hectic daily work situation is manageable. Regular team reflection on staffs' practices, values and attitudes, evaluation and feedback from experts outside the team and organisation, and managerial sensitivity to staff members' subjective experience of aggression are of importance for maintaining and enhancing the quality of support for residents with intellectual disabilities and challenging behaviour. In addition, successful services are characterised by written personalised intervention programmes and overt coaching and training. Sufficient availability of resources, a positive attitude towards interventions, and commitment of the organisation as a whole to handle problems and strains that are associated with the support or treatment of challenging behaviour are necessary.

Limitations

Studies using different methods and populations make comparison and compilation of results difficult. This leads to several inconveniences for drawing conclusions. First, finding a common denominator in varied research results belonging to the same ecological system(s) leads to a more abstract level of conclusions. Second, generalisation of the results and conclusions on the basis of various studies involving residents with intellectual disabilities and challenging behaviour is difficult, because reports in our literature review did not always define the nature of the conditions and behaviours of the subjects, and in any case, characteristics of people with intellectual disabilities and challenging behaviour are highly idiosyncratic. Third, challenging behaviours and

their intensity as reported in the studies we found, have not been assessed in comprehensive functional analysis, but rather on the basis of behavioural scales administered by staff.

The use of a scoping study has also limitations, such as the difficulty to evaluate the quality of the evidence of the primary study in a formal sense, and to weigh the specific aspects of the phenomena under study in the different studies (Arksey & O'Malley, 2005). Furthermore, we did not conduct an exhaustive search in all the journals in the field of intellectual disabilities, only the most recognized journals were used.

The use of the theory by Bronfenbrenner may also have limited our analyses, and other ecological models may also have been useful with respect to analysing information from studies about people with intellectual disabilities and challenging behaviour. For example, the International Classification of Functioning, Disability and Health (WHO, 2001) or the Disability Creation Process (Fougeyrollas *et al.*, 1998). However, the Bronfenbrenner model is more apt to classify different levels of environmental factors. Furthermore, we used a simplified graphic representation of Bronfenbrenner's theory as used by INSERM (2016). There are though more graphic representations such as by Absil and colleagues (2012) or Neal and Neal (2013) which may also be useful to understand the complexity of the ecological system and in future research.

2.5. CONCLUSION

Use of an ecological approach helps to shift focus of attention in challenging behaviour from the person as the locus of the problem to the lack of fit between the person and their (organisational) environment. Understanding the complex and reciprocal interactions that occur in and between elements of the different ecological layers may contribute to identify and solve problems, which are rather of an organisational nature than a clinical or health related nature in order to achieve positive outcomes for residents with intellectual disabilities and challenging behaviour. The influences of the organisation on the quality of care and on challenging behaviour in residents with intellectual disabilities are evident though complex and not easily unravelled. Shogren (2013) concluded that studies into contextual factors related to (the support of people with) intellectual disabilities are important, but the generalisation of evidence is difficult, because contextual factors are independent and intervening aspects, and contexts differ from one another and over time. Even though studies with an ecological perspective are complex, the prevalence of challenging behaviour in residents with intellectual disabilities and the quality and effectiveness of the services provided for this population deserve systematic study from the ecological perspective.

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APPENDIX

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Table 1 Overview of the articles included in the analysis

	Article	Aim	Key words	Design and methods
1	Beadle-Brown *et al.*, 2014	To examine the role of practice leadership in residential services for people with severe or profound IDs in relation to the implementation of active support	Active support, engagement, implementation, management, practice leadership	Quantitative research with questionnaires and scale-based observations in two time periods (n = 116) of a charity in the UK
2	Beadle-Brown *et al.*, 2015	To test the reliability and internal consistency of a practice leadership measure, and describe the extent of practice leadership and its relationships with the quality and frequency of staff support and resident outcomes	Active support, ID, person-centred, practice leadership, service development	Interviews, paperwork review, and observations in 58 services across 9 organisations providing support in Australia
3	Bigby, 2006	To evaluate the effects of relocation from a large institution to small group homes in Australia, to identify factors that may contribute to the shortfall in resident outcomes against expectations, to consider the interrelationships of these factors with broader trends in social policy and service development, and to identify issues in the further relocation of residents and eventual closure of institutions in Australia	De-institutionalisation, group homes, privatisation, system dynamics	Evaluative study (n = 27 people with intellectual disabilitiess), qualitative methods and phenomenological approach (focus group, semi-structured interviews, phone survey, and in-depth case studies)
4	Bigby *et al.*, 2009	To link two studies that explored attitudes of staff in community-based services toward the realisation of policy for people with severe IDs	Attitudes, choice and inclusion, policy implementation, severe and profound ID	Large ethnographic and action research study examining the transition of 25 residents from institutions to small group homes. Questionnaire-based testing of 144 direct-care staff members and frontline managers in Victoria, Australia
5	Bigby *et al.*, 2012	To conceptualise the potential characteristics and dynamics of culture in group homes and describe the culture in underperforming group homes for people with severe IDs	Supported accommodation, group homes, culture, staff practices	Secondary analyses with an inductive interpretative approach of ethnographic and action research to explore quality of life outcomes of 26 residents in 5 small group homes with 30 staff members in Australia
6	Bigby *et al.*, 2015	To report on a subset of data from a study of culture in group homes for people with severe IDs, exploring the cultural dimension of regard for residents in higher-performing group homes	Culture, group homes, staff practices, supported accommodations	Three in-depth qualitative case studies in Australia using participant observation, surveys, interviews, and document review
7	Broadhurst & Mansell, 2007	To examine how successful placements differ from those leading to breakdown, with examination of resident characteristics, professional and management support, and written guidelines and procedures	Challenging behaviour, ID, placement breakdown	Non-experimental comparison between breakdown and maintained groups of residential homes in South-East of England with questionnaires (n = 39 managers)

Conclusions	Ecological system aspects
Higher-quality management and practice leadership resulted in a significant difference in Active support. However, training, career development, support of practice leaders, and protected time are needed. Further research on good practices and elements of practice leadership, and competencies of frontline managers, is needed.	Ontosystem (adaptive behaviour), microsystem (resident–staff interaction), exosystem (implementation of working method, practice leadership)
Practice leadership is linked to the quality of staff practice and resident outcomes. Manager training and different structures for organisational management are needed. Future research should study the use of the practice leadership measures in different contexts, the impact of practice leadership on staff practices other than the quality and frequency of staff support, and factors that support frontline managers' ability to be good practice leaders.	Ontosystem (adaptive behaviour), microsystem (resident–staff interaction), exosystem (implementation of working method, practice leadership)
The role of the government changed from service provider to purchaser with respect to privatisation and contracting out of service provision. Changes in employment practice have impacted the flow of information about residents. The focus of the service contract on individuals led to less focus on tackling systemic issues. Renewed emphasis on partnerships with community developmental roles, rather than business relationships between residents and the organisation, and the adoption of an Active support model for the organisation of staff tasks are desirable for the development of care services.	Exosystem (performance monitoring), macrosystem (de-institutionalisation)
More focus on staffs' understanding of values embedded in current policies (inclusion, choice, and participation), and their application to people with more severe disabilities is needed. Policy implementation needs to create a climate in which staffs' personal beliefs are consistent with policy, or are identified and challenged using organisational rules and procedures	Ontosystem (adaptive behaviour), exosystem (policy in daily work, culture)
Culture is an under-investigated factor associated with resident outcomes. The dimensions of culture are power-holder values, regard for residents, perceived purpose of staff work, working practices, and orientation to change. Intervention that targets one aspect influences other aspects. This conceptual model is a starting point for research in high-performing group homes, and the development of a more quantitative measure of group home culture than benchmarks derived from the ideal type model.	Microsystem (staff perceptions of residents' abilities), exosystem (mission, culture)
Explicit and continuing attention to sustaining positive regard for residents in daily practise, and turning abstract values into concrete realities, is needed. To develop a norm of positive regard of residents, various aspects are necessary: a policy to guide thinking about the correct norm, organisational language, processes to support behaviour according to the norm, and practical leadership.	Microsystem (staff perceptions of residents' abilities), exosystem (policy in daily work, practice leadership, mission, power, culture)
Resident characteristics such as inappropriate sexual behaviour may be important determinants of community placement success for people with intellectual disabilitiess and challenging behaviour, as may be the required staff competence and extent of support. Research on family situations and day care is under-appreciated.	Ontosystem (challenging behaviour), exosystem (performance monitoring)

Table 1 Overview of the articles included in the analysis (continued)

	Article	Aim	Key words	Design and methods
8	Chou *et al.*, 2010	To examine differences in staff job satisfaction, including organisational and individual characteristics, among three residential models	Community living, ID, job satisfaction, small residential home, staff	Cross-sectional quantitative study in Taiwan using a standardised self-administered questionnaire (n = 1301 staff members)
9	Courtemanche *et al.*, 2014	To evaluate the effectiveness of a staff training package in teaching three staff members how to implement intervention plans to reduce self-injurious behaviour with high levels of integrity, and to assess staff fidelity to the intervention plan when monitored or provided with feedback and money	Self-injurious behaviour, staff training, feedback, money, role play, *in vivo* training	Multiple baseline design across three dyads to evaluate the effects of the staff training package on staff and consumer behaviour in the trainer's presence and absence, in the USA
10	Deveau & McGill, 2016	To examine managers' influence as practice leaders on staff behaviour, and to determine whether it is consistent with evidence-based policy and practice	Challenging behaviour, ID, leadership, management	Qualitative approach with interviews (open-ended and semi- structured questions) of 19 managers of staffed group homes in Southern East England
11	Dilworth *et al.*, 2011	To examine the relationships between attributions of control over challenging behaviour and client-related and staff-related variables, and the level of organisational functioning	Challenging behaviour, ID, organisational function, staff attributions, topography	Cross-sectional survey of 43 residential homes with at least 1 individual who displayed challenging behaviour; assessments and interviews of managers (n = 43) and care staff (n = 139) using scales, in the UK
12	Felce *et al.*, 2002	To examine associations among the service sector, staffing levels, staff characteristics, working methods, setting milieu, staff activity, and the nature of resident–staff interaction	Service sector, staff, working methods, setting milieu, ID	Quantitative description of staff activity in 29 staffed housing schemes with 97 residents in South Wales, analyses of service structure and settings' formal organisation, interviews with the use of scales, diaries, and observations
13	Felce & Perry, 2004	To examine associations between age and size of the setting and staffing per resident; to report on resident and setting characteristics, and indicators of service process and resident activity from a national random sample of staffed housing	ID, internal organisation, resident activity, residential settings, staff performance, staffing levels	Secondary analysis of 51 settings (with 163 residents) in Wales; interviews, observations, and statistical analyses
14	Gillett & Stenfert-Kroese, 2003	To assess organisational culture and quality outcomes in small community-based residential services for people with intellectual disabilitiess; to investigate demographically comparable residential units with differences in residents' quality of life in association with organisational culture	Organisational culture, quality of life, residential services, staff performance	Pilot cross-sectional study of two matched residential units (high- and low-performing; n = 15 staff members)

Conclusions	Ecological system aspects
Predictors of job satisfaction are the setting provider, service model, working position, number of years of education, and age. Differences were seen among large, medium, and small residential settings. Policy should focus more on changing the organisational structure, and direct-care workers' job satisfaction needs to be promoted.	Exosystem (personnel policy, size and organisational model)
Implementation of an intervention plan was high in role-play situations and with the residents when staff received feedback and money based on their fidelity. Because of turnover, new staff members must be trained on how to implement intervention plans and long-term staff members need ongoing feedback about how they use working methods. Future research should evaluate contingencies that promote the use of intervention plans.	Microsystem (resident–staff interaction), exosystem (implementation of working method)
A conceptual framework of practice leadership consists of performance monitoring, supporting new ways of working, shaping staff performance, influencing external and employing agencies, and recognising the importance of participants' personal values and experience. Research on service users' outcomes in relation to management and/or leadership is required.	Exosystem (performance monitoring, practice leadership)
Staff attributed challenging behaviour as being less under the persons' control when organisational quality was higher. Future research should investigate the topography of challenging behaviour using more detailed assessments and comprehensive functional analysis. Individual (topography of behaviour) and environmental (staff behaviour, quality of the service and organisation) factors should be considered with regard to interventions that increase staff helping behaviour (e.g. manipulation of staff attributions).	Ontosystem (challenging behaviour), microsystem (staff perceptions of challenging behaviour), exosystem (culture)
Few differences exist between statutory, voluntary, and private sector provision with respect to staffing, planning, and milieu (interaction). Higher staffing or presence of key workers, and size of residence, did not predict the amount of time staff spent giving attention or assistance to residents. Further research on the impact of resident mix, links between the service organisation and staff performance, and retention of experienced staff appears to be important, and the identification of ways to ensure that staff support matches the needs of residents better is needed.	Ontosystem (adaptive behaviour), microsystem (resident–staff interaction, grouping of residents), exosystem (size and organisational model)
The age of the residence is linked to the larger size of the residence and a smaller staff–resident ratio, and smaller settings tend to have greater staff demands. People with more severe disabilities do not receive more staff support.	Ontosystem (adaptive behaviour), exosystem (size and organisational model)
Higher-performing settings have more positive organisational cultures, with less negatively influential cultural styles (oppositional, competitive, and perfectionistic components). A more comprehensive understanding of the relationship of organisational culture to quality outcomes in residential services for people with intellectual disabilitiess is needed, and research on clinical factors in combination with organisational factors can guide the design of an environment that supports staff and residents.	Microsystem (perception of residents' abilities), exosystem (power, culture)

Table 1 Overview of the articles included in the analysis (continued)

	Article	Aim	Key words	Design and methods
15	Guerrero *et al.*, 2014	To examine associations between external and internal organisational factors (state licensure, professional accreditation, public funding, insurance reimbursement capacity, leadership, managerial capacity, staff resources for change) and the implementation of contingency management and medication-assisted treatment in substance abuse treatment programmes serving racial and ethnic minority communities	Implementation, evidence-based practices, contingency management, medication-assisted treatment	Analysis of cross-sectional data from a random sample of 122 supervisors of publicly funded programmes in California, USA
16	Hensel *et al.*, 2014	To gain insight into staff exposure to objective and subjective experiences of aggression and endorsement of emotional difficulties, and to evaluate the contributions of four behavioural topographies to staff-rated perceived severity	Aggression, challenging behaviour, community staff, trauma, ID	Cross-sectional survey of 386 staff members at community residential group homes for adults with intellectual disabilitiess in Canada
17	Hulgin, 2004	To compare organisations that have successfully adopted person-centred planning on a limited scale and examine contextual factors in relation to implementation	ID, organisation, person-centred planning, implementation, contextual factors	Qualitative research in the USA with 84 interviews, 38 participant observation episodes, and review of organisational documents and materials
18	Li *et al.*, 2011	To examine the relationship between SMI (schizophrenia and bipolar disorder) diagnosis and admission to lower-quality nursing homes	SMI, deficiency citations, nursing home quality, schizophrenia, bipolar disorder	National cohort study of 1.3 million new nursing-home admissions in the USA; statistical analyses
19	Mansell *et al.*, 2002	To assess the needs and characteristics of residents and features of residential homes provided by a national charity, to inform the training of future staff	Adaptive behaviour, epidemiology, needs, planning, problem behaviour	Quantitative research with assessment of (adaptive and problem) behaviour and social impairment by staff, and information about costs and staffing from central records (n = 99 community-based residential services in England)
20	Mansell *et al.*, 2008	To assess the effects of a wide range of organisational variables (organisation of care, staffing, staff experience and satisfaction, care practice) on the extent of the use of Active support in community residential services	Active support, quality of care, residential care	Statistical analysis of managers trained in active support and comparison of settings in 36 residential homes provided by a national charity throughout England
21	Surjus & Campos, 2014	To examine the interface between ID and mental health care and contributions to moderating the path of institutionalisation of individuals with intellectual disabilities	ID, mental disorders, diagnosis, mental health, review, dual diagnosis, hermeneutic	Hermeneutic review based on a literature search, experience of authors and history

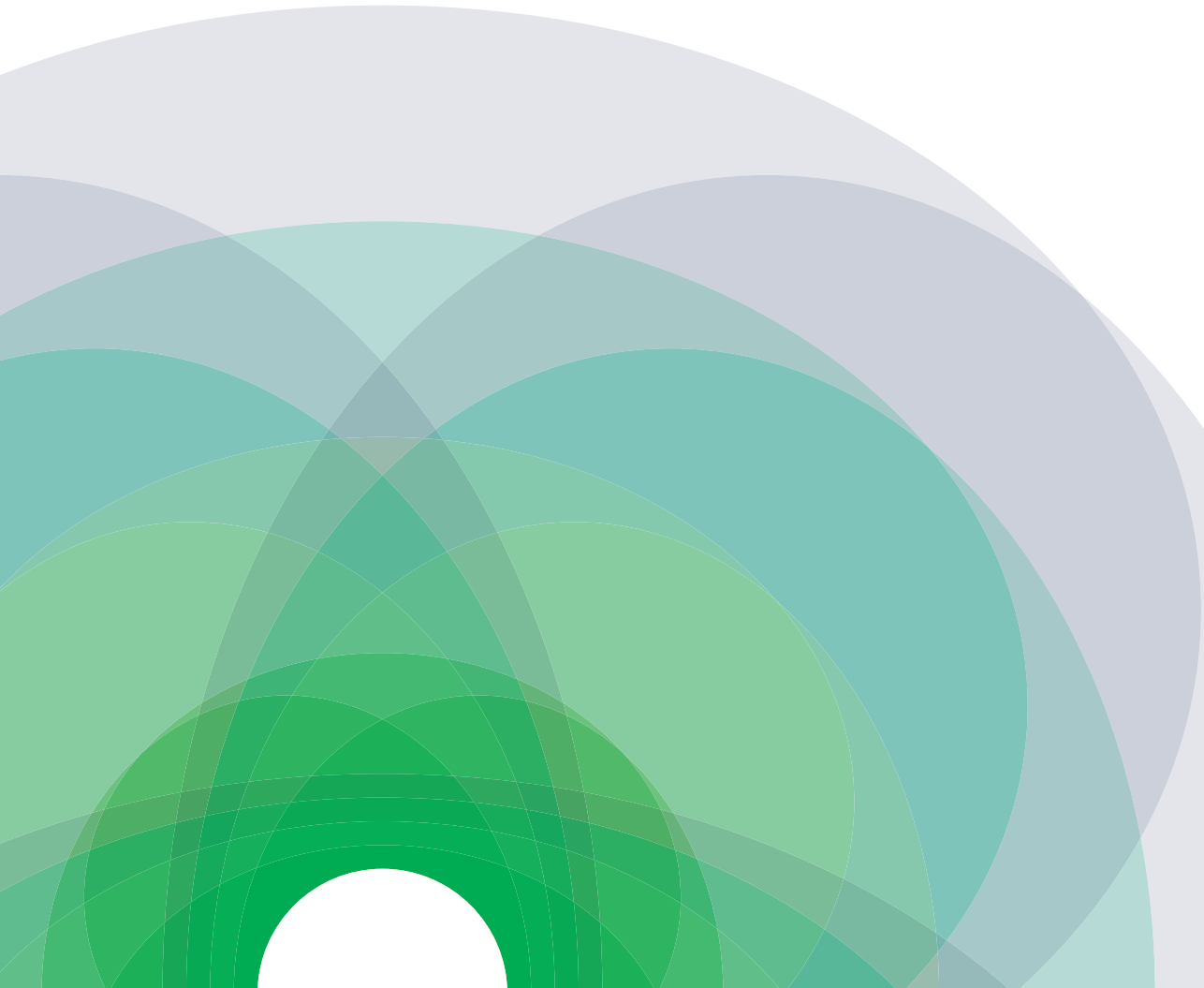
Conclusions	Ecological system aspects
Large programmes with parent organisations and several insurance reimbursement options have the most capacity, but middle managers' attitudes about evidence-based practices and readiness for change also contribute to the implementation process; policy makers should invest in these aspects.	Exosystem (implementation of working method)
Perceived severity of an incident is associated with more frequent aggression and aggression toward property or others, rather than other subtypes. A discrepancy may exist between the objective severity of aggression and staff's perception. Future research should capture additional aspects of staff experience longitudinally. Further understanding of factors contributing to post-exposure staff response is needed. Staff, managers, and supervisors need to pay attention to the subjective experience of aggression.	Microsystem (staff perception of challenging behaviour), exosystem (performance monitoring)
The context of implementation is more important than the ideals or systems as a whole. The capacity for change varies among organisations; different approaches are necessary to achieve change.	Exosystem (implementation of working method)
People with SMI are more likely than other residents to be admitted to nursing homes with lower quality overall and in terms of clinical care. The lack of resources and clinical expertise to serve patients with SMI needs further attention.	Ontosystem (challenging behaviour), exosystem (personnel policy)
People with high levels of complex behaviour and particular needs are distributed throughout services; thus, a very high proportion of services require staff with relatively advanced skills. Specific training is needed for staff working with people with severe and profound IDs. Health professionals and organisations need to utilise their knowledge and skills through training, organisation, and leadership of staff; decision makers and public authorities should commission organisations with skilled staff.	Ontosystem (challenging behaviour), microsystem (grouping of residents), macrosystem (de-institutionalisation)
Professional qualification, knowledge and experience, staff attitudes, clear management guidance, frequent supervision and team meetings, and staff training and support increase residents' engagement in meaningful activity. Organisational factors need to be studied in more detail, and what precisely works to increase Active support for residents with severe IDs needs to be explored.	Ontosystem (adaptive behaviour), exosystem (implementation of working method, size and organisational model)
Further examination of signals of silent longevity in psychiatric hospitals or newly organised substitutes for people with intellectual disabilitiess and mental health problems is important. Based on experience in Europe and the UK, dialogue must be opened between managers and professionals, and they must be made aware of the needs for training, access and mental health care for people with intellectual disabilitiess, and de-institutionalisation.	Ontosystem (challenging behaviour), exosystem (size and organisational model), macrosystem (de-institutionalisation, financing of care, societal structures and belief systems)

Table 1 Overview of the articles included in the analysis (continued)

	Article	Aim	Key words	Design and methods
22	Sutton *et al.*, 2016	To determine the impact of organisational climate on the function of teams that prescribe clozapine to people with treatment-resistant schizophrenia in a mental health trust in the National Health Service in the UK	Clozapine, medication management, National Health Service, organisational change, organisational climate, pharmacist prescriber, philosophy of care, role ambiguity, schizophrenia, UK	Qualitative research (interviews) with 30 health care professionals in 7 clozapine clinics, interpretative phenomenological analysis
23	Svab & Tomori, 2002	To compare Slovene psychiatric hospitals and community rehabilitation services with services in Slovakia, the UK, and The Netherlands	Psychiatric hospitals, community rehabilitation services, review, countries	Literature review and Danubian Psychiatric Association follow-up study of changes of psychiatric care in Eastern and Central Europe
24	Thompson Brady *et al.*, 2009	To assess the conceptualisation of values and definition of leadership, and determine whether an authentic leadership framework is helpful for reflection on leadership of organisations providing care to people with disabilities	Authentic leadership, organisation, ID	Exploratory online survey–based research involving 30 executive leaders and 32 emerging leaders in the USA
25	Tossebro *et al.*, 2012	To explore the practical development of services and policies in day-to-day practices after the reform energy of the second wave of de-institutionalisation vanished, the political attention faded, and new systems were operational	ID, local autonomy, Nordic countries, normalisation, service development	Discussion and comparative analysis based on research reviews of recent developments in services for people with intellectual disabilitiess in the five Nordic countries
26	Walker, 2012	To assess organisational strategies used in the transformation from group homes to individualised support	Supported living, organisational change, developmental disabilities, individualised support	Qualitative research with 2-day site visits and interviews with 66 people in four organisations in the USA
27	White *et al.*, 2003	To review the literature on abuse of people with intellectual disabilitiess, identifying environmental and organisational cultural aspects	Abuse, culture, environment, vulnerability	Literature review
28	Wooderson, *et al.*, 2016	To test a short questionnaire to evaluate managers' practices for staff performance improvement and to analyse questionnaire responses	Developmental disability, ID, performance improvement, staff management, staff performance	Quantitative analysis, survey of 175 frontline managers in Queensland, Australia

Abbreviations: ID, intellectual disability; SMI, severe mental illness

Conclusions	Ecological system aspects
Factors associated with the organisational climate (role conflict, job satisfaction) can inhibit the work of the team, and staff did not identify patients' needs or innovative care delivery because of role conflict and less job satisfaction. Deficiencies within micro-climates may be manifestations of wider structural problems, and may require local initiatives to create productive and rewarding work environments for the delivery of effective and efficient services and staff and patient satisfaction.	Microsystem (resident–staff interaction), exosystem (personnel policy, performance monitoring, power)
Slovenia needs guidelines for future development of mental health services for the severely mentally ill in the specific Slovene setting. British, Dutch, and other reforms have specific characteristics related to their histories, mental health systems, and social and service characteristics, but the advantages and drawbacks of community care are clear, and Slovenia can learn from these examples.	Macrosystem (de-institutionalisation, financing of care, societal structures and belief systems), chronosystem (service development)
Authentic leadership depends on dedication to the population to which services are provided and the organisational mission, transparency, communication, and management. This research should be repeated with a larger sample and less open-ended research method in relation to the quality of the organisation, and further clarification of the values and skills reported is required.	Exosystem (policy in daily work, authentic leadership)
Trends exist toward larger group homes and congregations, inequality across municipalities, marketization, new public management, more consumer rights, and the use of personal assistance schemes in support services. The position of managerial and economic accountability has strengthened, creating risks for services for vulnerable groups. Provisions and regulations that safeguard against the vanishing of national policies when transformed into everyday practice of local governments must be introduced.	Macrosystem (disability policy, financing of care, societal structures and belief systems), chronosystem (service development)
A cultural change, instead of a change in service provision, is necessary for authentic organisational transformation. Perseverance and commitment to the change process are desirable.	Exosystem (policy in daily work, personnel policy, mission)
The role of the individual is emphasised in abuse; the broader context needs attention. Aspects of this context are management; staff deployment and support; staff attitudes, behaviour and boundaries; staff training and competence; power, choice and organisational climate; isolation; service conditions; design; and placement planning.	Microsystem (staff perception of challenging behaviour, grouping of residents), mesosystem (staff network), exosystem (policy in daily work, personnel policy, performance monitoring, practice leadership, power, culture)
Frontline managers believe strategies related to changing individual staff practices are more effective than changing structural environmental factors. Further research is required to identify factors that influence performance improvement strategies. Frontline support managers should make use of research-based approaches.	Exosystem (practice leadership)



Chapter 3

Influence of the organisational environment on challenging behaviour in people with intellectual disabilities: Professionals' views.

This chapter is published as:
Olivier-Pijpers, V.C., Cramm, J.M., & Nieboer, A.P. (2019). Influence of the organisational environment on challenging behaviour in people with intellectual disabilities: Professionals' views. *Journal of Applied Research in Intellectual Disabilities*, 32, 610-621.

ABSTRACT

Background

We examined the influence of the organisational environment on challenging behaviour in people with intellectual disabilities to increase understanding of the quality of support services for people with intellectual disabilities.

Method

Twenty-one professionals and managers from four specialized Dutch disability service organizations were interviewed. Data were analysed with a grounded theory approach, using Bronfenbrenner's ecological theory as a sensitizing frame.

Results

The organisational environment (i.e., vision, values, sufficient resources) is related via the support service (i.e., providing stability, constant awareness) to residents' challenging behaviour and is also linked directly to challenging behaviour (e.g., living environment, values). Organizations are restricted by national regulations, negative media attention and changing societal values, which negatively influence quality of support.

Conclusions

The creation of a supportive organisational environment for staff, who in turn can provide quality support services to residents with demanding care needs, was found to prevent challenging behaviour in people with intellectual disabilities.

3.1. INTRODUCTION

People with intellectual disabilities are at increased risk of developing challenging behaviour, defined by Emerson (2001, p. 3) as:

> 'culturally abnormal behaviour(s) of such an intensity, frequency or duration that the physical safety of the person or others is likely to be placed in serious jeopardy, or behaviour which is likely to seriously limit use of, or results in the person being denied access to ordinary community facilities'.

Challenging behaviour includes physical aggression, problematic sexual behaviour, self-injury, destructiveness and stereotypical behaviour. These behaviours threaten the quality of life of people with intellectual disabilities and those in their support systems and often lead to exclusion from society. People with intellectual disabilities and challenging behaviour are also at greater risk of ineffective treatment, abuse and high rates of restraint and medication (Allen, Lowe, Moore, & Brophy, 2007; Emerson & Einfeld, 2011; Hamlin & Oakes, 2008; Hastings *et al.*, 2013; Hensel, Lunsky, & Dewa, 2014; Knotter, Stams, Moonen, & Wissink, 2013; Totsika, Toogood, Hastings, & Lewis, 2008; White, Holland, Marsland, & Oakes, 2003).

"Challenging behaviour" has been described as an ecological construct and thus is expected to be influenced by the responses of other people in the social environment. Other people include support service staff and professionals, who must support people with intellectual disabilities in a way that prevents challenging behaviour. This requirement may also apply to the wider support system, given that staff and professionals are supported by facilitating services, management and chief executive officers (CEOs) of disability service organizations. Dilworth and colleagues (2011) stated that relationships between people with intellectual disabilities and challenging behaviour and people in the organisational environments in which they receive treatment are expected to be dynamic. Although research has pointed towards the importance of a supportive organisational environment in preventing challenging behaviour in people with intellectual disabilities, empirical research is largely lacking (cf. Bigby & Beadle-Brown, 2018). Studies investigating the role of the organisational environment in the development of challenging behaviour in people with intellectual disabilities, and comparing service delivery types, are expected to increase our understanding of the relationship between the organisational environment and challenging behaviour. These studies should enable the provision of better care and treatment to people with intellectual disabilities (Bigby & Beadle-Brown, 2018; Bigby, Clement, Mansell, & Beadle-Brown, 2009; Carr, 2007; Dilworth *et al.*, 2011; Emerson & Einfeld, 2011; Felce, Lowe, & Jones, 2002). This qualitative study examined the influence of the organisational environment on challenging behaviour in people with intellectual disabilities in a sample of specialized residential disability service organizations. We analysed these entities' organisational and support models from the perspectives of professionals and managers, using ecological theory as a source of sensitizing concepts.

Ecological theory

The ecological theory of Bronfenbrenner (1979, 1994, 1999; Bronfenbrenner & Morris, 2006) was used as a sensitizing frame for this study. Under this theory, individual human functioning and development are assumed to be the result of complex interactions between an active, bio-psychologically developing person (the ontosystem) and four nested environmental "layers" consisting of persons, objects and symbols (the micro-, meso-, exo- and macrosystems). This framework is dynamic: The environment and the person within it interact regularly over time through proximal processes. Furthermore, the systems are interrelated; the person can influence and be influenced by nearby environments. The temporal aspects of these systems constitute an additional ecological element, the chronosystem, in which the person, his or her environments and interrelations between them change over time (Bronfenbrenner, 1979, 1994; Tudge, Mokrova, Hatfield, & Karnik, 2009), resulting in the model shown in Figure 1 (Institut National de la Santé et de la Recherche Médicale, 2016).

The ontosystem includes a resident's personal biological (genetic and physical) dispositions and psychological characteristics, such as skills and experiences (Bronfenbrenner & Morris, 2006; Tudge *et al.*, 2009). The environment around the resident, the microsystem, consists of activities with others, social roles and interpersonal relations in face-to-face interactions with family members, other residents and/or staff members. The mesosystem includes interactive connections between microsystems, such as those between the staff of the group home and that of the resident's workplace and/or interactions within staff member teams. The exosystem (in this study, the disability service organization) consists of relationships between, for example, staff members at the resident's group home (the microsystem) and proximate elements which positively or negatively influence the microsystem, such as the organization's upper management and board members. These actors do not interact directly with residents on a regular basis. The macrosystem is formed by societal rules, laws, funding systems and attitudes (e.g., belief systems, budget allocation systems, material resources) which are shared among the ecological systems and characteristics of a culture. The chronosystem encompasses the development of the resident and systems over time.

Thus, a resident's challenging behaviour (ontosystem) is presumed to be influenced by the group atmosphere (microsystem) and by positive interactions between his or her parent and staff member (mesosystem), which may be influenced in turn by the organisational culture (exosystem), which may be influenced by societal values (macrosystem). Furthermore, a resident's behaviour and the ecological systems change over time (chronosystem). These six environmental layers were used as sensitizing concepts in this qualitative study to identify the influences of the organisational environment of residential disability service organizations on challenging behaviour in residents with intellectual disabilities.

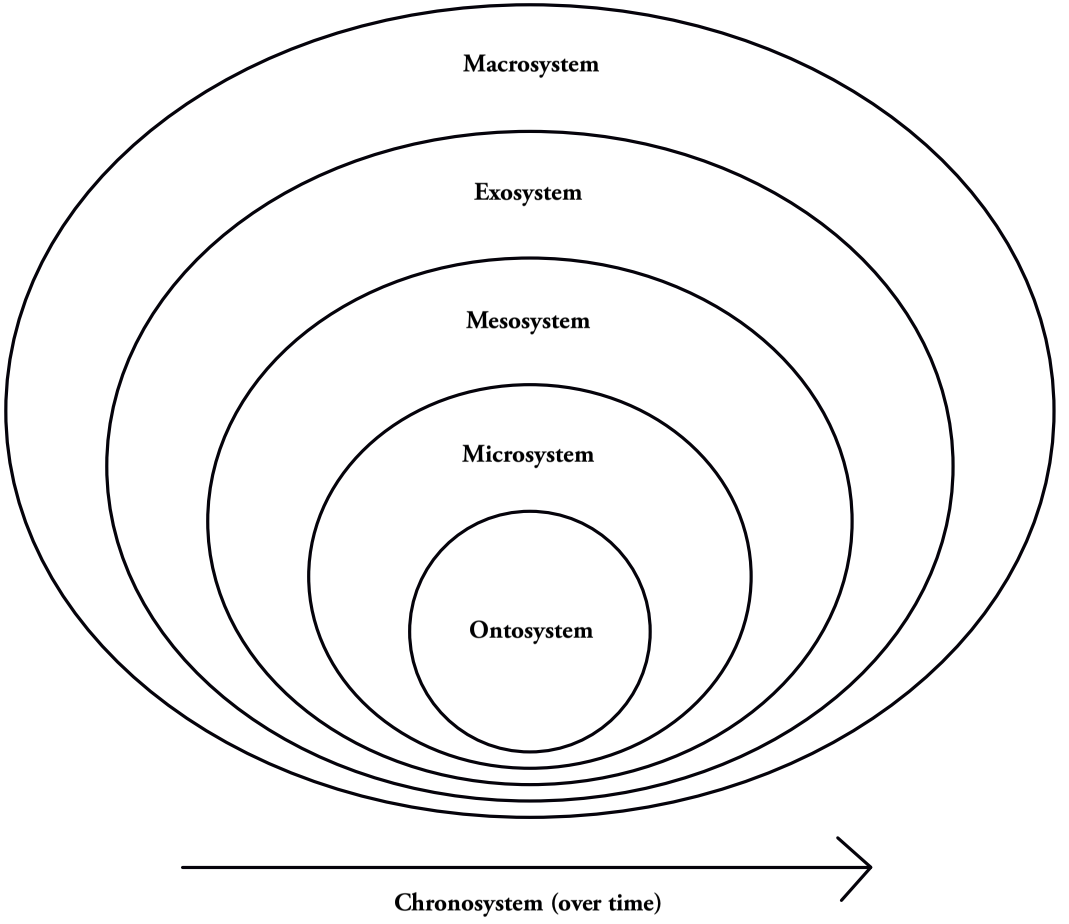


Figure 1 Ecological model developed by Bronfenbrenner (1979, 1994, 1999); Bronfenbrenner and Morris (2006) and adapted by INSERM (2016, p. 982)

3.2. METHOD

Design

This study used a grounded theory approach, which is appropriate for the identification and explanation of social processes. This approach consisted of an inductive process in which data were collected systematically through interviews and analysed with respect to our research question, using the six environmental layers drawn from ecological theory (ontosystem [residents], micro- and mesosystems [support services], exosystem [organisational environment], macrosystem [society] and chronosystem [changes in the systems]) as sensitizing concepts (Strauss & Corbin, 1990 in Bowen, 2006). Sensitizing concepts are interpretive devices that give a general sense of how to arrange data without prescription (Bowen, 2006; Padgett, 2004 in Bowen, 2006). Data were further analysed through iterative close reading and coding to identify latent patterns in multiple participants' perspectives (Bowen, 2006).

We used constant comparative analysis, which entails continuous examination of and searching for boundaries of themes, segmentation and relationships between themes, to go beyond the sensitizing concepts and further ground the theory. Data were studied in several rounds to enhance external validity, until theoretical saturation occurred (Boeije, 2002; Bowen, 2006; Dunne, 2011). The trustworthiness of qualitative research is associated with the degree of credibility (e.g., use of acknowledged methods, familiarity with the field of disability plus challenging behaviour), transferability (e.g., clear description of participants and interviews) and dependability and confirmability (e.g., use of detailed methodology with constant reflection) (Shenton, 2004).

Setting and participants

Four specialized residential disability service organizations for people with intellectual disabilities and challenging behaviour in the Netherlands were selected based on variation in region, organisational size and stage of organisational development. An upper manager from each organization was asked to select two locations where residents with intellectual disabilities received specialized support for challenging behaviour. Participants were psychologists (responsible for overall support services, treatment and intervention plans), heads of group (responsible for day-to-day support of one or more groups/houses) and managers (responsible for three or more groups/houses). They were selected based on their familiarity with the group of residents and the organisational environment and their ability to discuss the relationship between challenging behaviour and the organisational environment.

Ethics

The Dutch Central Committee on Research Involving Human Subjects confirmed that this research did not fall under the scope of the Medical Research Involving Human Subjects Act.

Data collection and analysis

The first author, an experienced psychologist in the field of intellectual disabilities and challenging behaviour, held interviews lasting about 1 hr each on location. The interviews were based on the sensitizing concepts derived from Bronfenbrenner's ecological theory: (a) the ontosystem (characteristics of residents, e.g., age and challenging behaviour); (b) the micro-, meso- and chronosystems (support service characteristics, e.g., interaction staff members with residents and group dynamics); and (c) the exo-, macro- and chronosystems (organisational environment characteristics, e.g., culture, structure and national policies). Questions were open ended and generally used to help participants respond from their own perspectives (Appendix 1). In 2016, data were collected during 21 interviews at seven locations of four organizations. Interviews were taped, verbatim transcripts were generated, and sentences and small text sections were coded with open codes. Each code was compared with the other codes until theoretical saturation was visible, with inductively produced boundaries or code clusters. These clusters were labelled with the overarching theme (Boeije, 2002; Bowen, 2006; Dunne, 2011). The Atlas.ti software (version 7, Scientific Software Development, Berlin, Germany) was used for data analysis.

3.3. RESULTS

Themes generated from the interviewees' perspectives are presented in Figure 2. Results are reported according to system layers.

Ontosystem

Complex and extreme challenging behaviours.

Most residents in this study were Dutch men with mild to severe intellectual disabilities: Resident age ranged from 18 to 60 years. Psychiatric diagnoses included autism spectrum disorder, attachment disorder, psychoses and borderline syndrome. Some residents had multi-morbidity (e.g., with diabetes). Residents displayed extreme, intimidating challenging behaviours (e.g., aggression, self-injury, disruptive societal behaviour, problematic sexual behaviour), which challenged staff members, and resulted in histories of restrain interventions and frequent changes of group and organization. For example, a head of group stated:

> *All of our residents come from situations [ed: in our own or other organisations] in which people did not know how to manage their behaviours. One of the residents used to be tied to his bed, for almost two years. The moments in the day that he left his bed, about half an hour each, he had to be supported by four staff members.*

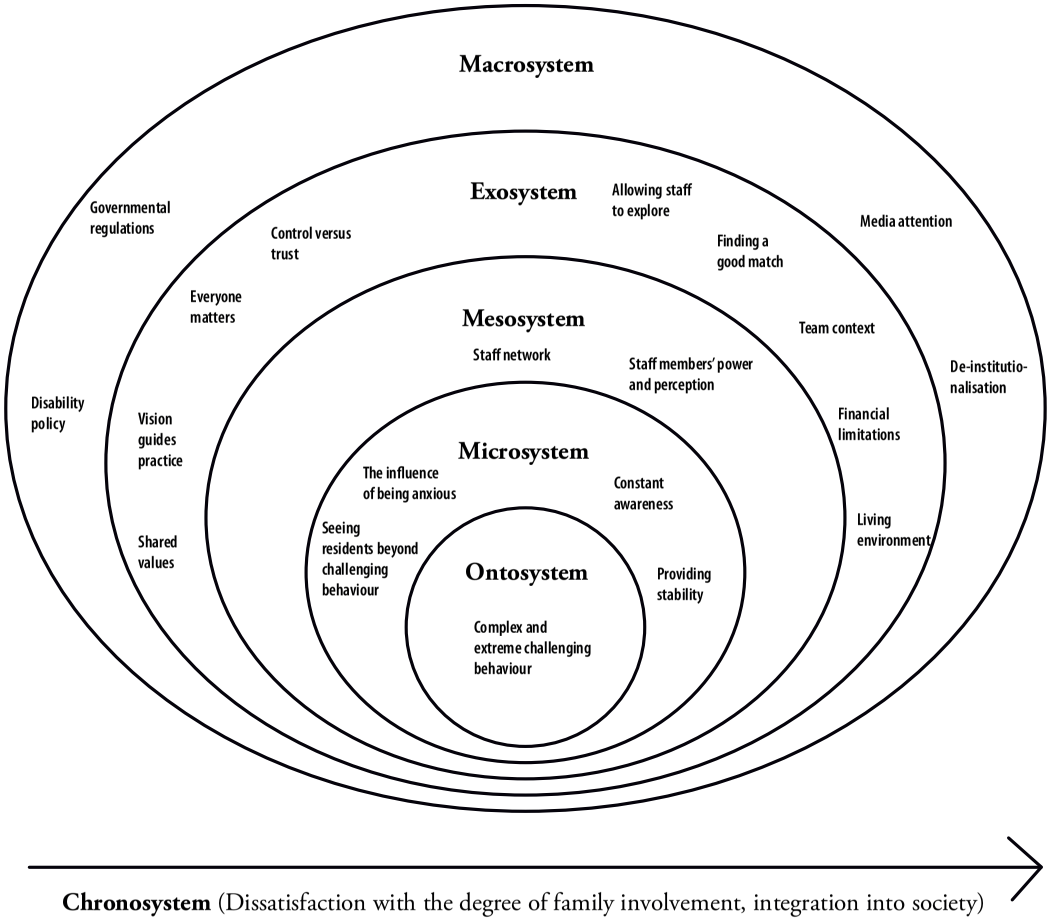


Figure 2 An ecological model of a person with intellectual disabilities and challenging behaviour, as viewed by professionals

Microsystem

The following microsystem themes were reported by participants: the influence of being anxious, seeing residents beyond their challenging behaviours, constant awareness and providing stability.

The influence of being anxious.

Several participants emphasized that challenging behaviour can physically and psychologically damage staff members, resulting in feelings of anxiety, which in turn influence the ways in which staff members try to manage residents' challenging behaviour. For example, a manager said:

> *How can I explain the tension between controlling behaviour and treatment? You can imagine that a resident's behaviour, certainly when they just arrive, is dangerous. Of course, there are many incidents, which naturally activate different processes in which the staff have to be or want to be protected. It creates anxiety, which influences how they react to challenging behaviour.*

Nevertheless, according to participants, staff members try to keep feelings of anxiety under control and act with confidence, which is not easy due to a resident's history of incidents. A psychologist explained:

> *R: They mustn't downplay the situation, but act confident; based on previous experiences, it can also turn out to be a positive situation. Yes, of course it is stressful going into a room [ed: with a resident], however, you can always leave.*
> *I: Yes.*
> *R: Dinner wasn't thrown, nor was the table.*
> *I: Nothing happened?*
> *R: No, but if you would know the histories of our residents then you would know this is something very unique: sitting down for dinner.*

Seeing residents beyond their challenging behaviours.

According to several participants, a staff member must see beyond a resident's challenging behaviours and accept that person for who he or she is. A manager explained:

> *We try to manage a resident's behaviour, but in such a way that it enables us to learn about how these behaviours have developed and truly understand them. Not in a judgemental, disapproving, or correctional manner. Someone lives here; you are here now and what happened in the past doesn't matter anymore. It is important for the staff to have an attitude of accepting the person. A person is more than his behaviour.*

According to participants, seeing a resident as more than just their challenging behaviours, although not easy, is important because challenging behaviour is a symptom of an underlying problem. A head of group stated:

> *A father can ask for protective clothes, stopping the tearing up of a resident's clothes. We will say, "Yes, but this is no solution because protective clothes is one thing to do, but he will start pulling his hair out or his teeth or something else will come in its place". So that is just combating a symptom, and we won't do that.*

Constant awareness.

All participants mentioned that staff members need to have excellent observational skills and be constantly aware of potential changes in residents' behaviour, as can be seen in a quotation from a head of group:

> *The staff are extremely aware, they have to be, no matter what happens. They are alert constantly, assessing risks continuously. Because, for example, a walk which you take four times a day can be different every time. You have to constantly assess: how is his [ed: the resident's] mood, state of mind, and how will I manage this?*

Furthermore, staff members' awareness and ability to observe their own behaviour in response to residents' challenging behaviour is just as important as their ability to observe residents' behaviour, as illustrated by the following quotation from a head of group:

> *The resident is who he is, and has experiences and memories of the past. Those are often the reason why a person displays challenging behaviour, and I think the only way to deal with this is by adjusting yourself and seeing yourself and the resident in a different way. When you only focus on changing the resident, you will get nowhere. And that is why you have to observe carefully and watch details of how I can interact differently, or what I can say differently, or how I can sit in another manner. So the resident acts differently.*

Providing stability.

Participants explained that to provide stability for residents, staff:resident ratios range from 3:1 to 1:3 during daytime hours, a team of 7–24 staff members support a group of four to seven residents, and the number of hours that staff members work is limited. A manager explained:

> *In order to create stability, we jointly created the rule that everyone has to work at least 24 hr per week but nobody is allowed to work full time. This was decided by all of us together. You have to work a minimum of three days per week with a resident, before residents are able to trust you in that moment and in new situations. Full time is not healthy in the support of this population.*

Mesosystem

Mesosystem themes reported by participants were involving family, staff's sense of safety and providing room for mistakes.

Involving family.

All participants reported that staff members have to try to facilitate contact between family members and residents (e.g., by visits, phone calls), and, if possible, to work together with family members in supporting a resident. Achieving this goal, however, is not always easy, sometimes due to family members' own disabilities or damaged relationships with the resident, as a head of group explained:

> *R: Their social network are asked to help, however, most do not have a social network.*
> *I: Oh, yes?*
> *R: Dad or mom were also in prison, or the relationship is dysfunctional. Some do have a good social network, those you can involve. Then we work together to organise things.*

Staff's sense of safety.

Several participants mentioned the necessity of creating a sense of safety for staff members, to enable them to manage residents' challenging behaviour. Thus, some organizations have intervention teams, as a head of group explained:

> *You have to create a sense of safety for the staff. We have intervention teams. So, when there is an incident or a distressed resident, other person, or staff member, the staff can send a signal through a pager for help, which is provided by colleagues. I can imagine when the staff do not feel safe because the intervention team members do not come or the pagers are broken, well yes. You have to make certain that the staff can rely on it, because otherwise there will be very serious consequences. The staff have to know if I signal, they will come to help.*

However, several participants reported being worried about the lack of feeling safe in the workplace, due to severe incidents and staff members' helplessness, as explained by a manager:

> *My first month, there was a severe incident with one of our residents, who threatened the staff of the night shift. Just threatening. But they were very alarmed by it, you must know. The staff said: "he does not belong here". Such responses are frequently expressed in our organisation.*

Providing room for mistakes.

Several participants emphasized the need to have room for mistakes. Staff members need support, rather than critique, from their colleagues, but this issue is often a problem in cases of incidents. A head of group explained:

Mistakes will be made. The fact is incidents with a resident will happen with consequences for yourself, the resident, and the setting. You have to accept the population you support, but do you also feel you are supported yourself or are you corrected for an incident?

Exosystem

Participants mentioned the following exosystem themes: vision guides practice, shared values, everyone matters, control versus trust, allowing staff to explore, finding a good match, the team context, financial limitations and the living environment.

Vision guides practice.

Vision was the organisational theme cited most frequently by participants, and it guides staff in providing proper support. It is associated with leadership, the organisational structure and the personnel policy, as illustrated by the following quotation from a psychologist:

But it is from top to bottom, the vision in our organisation. The vision is connected to the way we are organised: care is at the heart and not finances, and what is necessary in order to provide care. If there is a need for extra personnel because the resident needs it, we will provide them. We also believe in the head of group and a type of leadership. We have organised it from top to bottom, this has something to do with vision. It is he [ed: head of group] who can coach and support staff members, because he does the same work.

Some participants stated that acting in accordance with the vision requires schooling and guidance through regular reflection on one's actions. A manager explained:

Organising the translation of the vision [ed: into daily practices], by guiding the staff on how to act in daily practice, and a focus on schooling and de-escalating incidents. You have to stress that the staff have to manage residents' behaviours, and sometimes that unfortunately results in sending a resident to his room or a time-out. However, the staff have to immediately discuss what could have been done differently. It's not a mistake, but they have to reflect, so it won't happen again.

Insufficiencies in vision and a lack of focus on treatment methods affect staff's ability to manage challenging behaviour, according to a head of group:

Differences in vision between staff members or having no clear vision at all, no time for meetings to plan interventions, a lack of focus on care and treatment plans can all result in the staff struggling to effectively manage challenging behaviours.

Shared values.

A second organisational theme revealed during the interviews was the importance of shared values to guide appropriate staff behaviour in support services. A psychologist stated:

> *Well, they say it is a family culture, an organisation in which people are involved. The staff are really involved with each other, most have a great sense of responsibility and make an effort. They are interested and passionate.*

A head of group also reported on how values, instead of organisational systems, guide staff behaviour with respect to the management of challenging behaviours:

> *[ed: Values, such as] custom made, thinking in terms of possibilities instead of problems, and the staff taking responsibility. Because they have to manage behaviours. And which we will try to facilitate by minimising the use of systems to control the staff's actions.*

Furthermore, a manager explained how shared values guide behaviour of management towards staff, as well as the behaviour of staff towards residents:

> *Especially with this population, the way you interact with each other is visible in the way the staff interact with residents. So, there are parallel processes in how you handle your employees as management and how the staff manage [ed: challenging behaviours]. This will determine the culture, a good part of it.*

Shared values influence staff's attitudes and residents' behaviour, as illustrated by this quotation from another manager:

> *He came here [ed: was transferred from another organisation]. And the manager who came with him told me later, he said, the moment that we were inside, I knew all of the hassle would stop. Because of the new staff's basic attitude "nice, you're here".*

Everyone matters.

Many participants emphasized that everyone in the organization matters, which means that members take interest in others (residents and colleagues) and use each other's abilities and perspectives, rather than immediately turning to the manager for help. One manager stated:

> *The key is to make the others feel they matter. It is important for the staff, if someone does something: does this make a difference, can you go ahead or do you expect I will take over as manager? Well, I'd rather not. They have to see; the organisation is a place where you work*

together. It is nicer if you have a sense of equality, you can talk about what you observe and bring it all together.

Control versus trust.
A few participants stated that staff focus on trusting residents, but also have to control risks to create a safe working environment. A manager explained:

You have to have some appropriate level of distrust, you have to view residents in this way, with respect to safety [ed: of yourself]. If you think: "oh, what a nice man", and forget to ask first if it is safe to talk in his room. The staff might say: it is okay to talk, but somewhere else. There are always risks you have to think of.

Some participants stated that trusting residents is easily forgotten because arrangements to control challenging behaviour seem difficult to abandon. A head of group stated:

Someone goes to the toilet and a light appears outside the toilet. So I say why is that light there, when they go into the toilet. I say do we need to know this. Once it was necessary. It is a restrictive kind of support and I say: "well, shouldn't we stop this?" When you work a long time in the same way, then some things aren't noticed anymore. I said this has to go. You have to be aware that this is not normal, it has no purpose.

Allowing staff to explore.
Several participants reported on the extent to which staff members are allowed to explore and take risks in supporting residents with intellectual disabilities and challenging behaviour. To do so, staff members must develop themselves and take responsibility, as illustrated by a quotation from a head of group:

I think our organisation is very good at making personnel responsible and creative. They are competent, which makes them able to explore, in order to do a good job. The ability to explore leads to excellent results, I think. Of course, you have to be careful. This demands great responsibility, it can't be limitless. But overall, this way people do the best things.

Finding a good match.
Most participants emphasized the dynamics related to new staff members, who must be matched with residents, other staff members and professionals, as seen in a psychologist's statement:

A new head of group is needed. Someone on the staff team is capable, but then we have to find a new staff member, creating new dynamics. New dynamics can increase the quality, but can also… [ed: have a negative outcome].

In addition, new staff members must learn about the organization's vision and have specific qualities, as a manager explained:

> *Professional education is not necessary, but they have to be incorporated by our organisation. You have to know the residents, laws and regulations, knowledge of psychiatric disorders and moderate intellectual disabilities, that is what I mean….Also, involvement, are they unconditional and careful. That is what comes to mind: be in tune with residents, provide feedback, when somebody does something which is inadequate then be direct.*

Team context.

All organizations have a variety of professionals, such as speech therapists, physiotherapists and specific expert teams, but, according to most participants, the key professional providing staff support is the psychologist, followed by the head of group. A psychologist explained her role:

> *Accessible, approachable, as a psychologist should act. That is how I do my work. I try to be there [ed: at the group home] a lot of the time, accessible in contact, learn about the residents, which is very important. I must model, set an example.*

Furthermore, a close working relationship between the psychologist and the head of group is important in supporting staff, as explained by a head of group:

> *We have monthly staff meetings, me and the psychologist. We support each other in being informed about what happens in the group home, how residents are behaving, and what is necessary for staff members in order to provide quality support.*

Participants also emphasized that managers support staff members by being available to reflect on their work and help to reduce their stress, as a psychologist stated:

> *The manager is observing on a regular basis residents and staff members at the group home. The staff now know who the manager is, which was unlike before. There is more contact between the staff and management. So you can immediately ask for help from the manager.*

Financial limitations.

According to all participants, support services for people with intellectual disabilities and challenging behaviour require more financial means (e.g., to repair broken items or to provide more support) than do those for residents without challenging behaviour. This difference leads to rivalry within the organization because budgets are often redistributed, or the intensity of support is reduced. A psychologist stated:

A manager has to facilitate. And this can be difficult when a manager says that this group home does not have the budget for two staff members on the same shift. While the psychologist says it is necessary to accommodate the needs of residents and their support needs. Then we have to discuss this and find some solution.

Living environment.
Some participants indicated that residents and their behaviour are affected directly by the number of interactions and stimuli in the living environment, which are larger in large organizations. A psychologist explained:

R: A small cluster of group homes…You can limit stimuli.
I: Okay?
R: I mean, when a resident has a difficult day, they will not go with him to the town centre.
I: No, no.
R: We will monitor when and how it will be possible for the resident. However, in a large institution, when walking from the group home to work, they will already have seen 20 other people.

Furthermore, the furnishing and decoration of residents' living environments directly influence residents' behaviour, as reflected in a quotation from a psychologist:

But we feel that a human environment is just as important because it will influence your behaviour. When your living environment has declined, what difference will it make if you kick the door or throw a cup on the ground or whatever. It is already hideous.

Macrosystem

Participants primarily highlighted governmental regulations and media attention as macrosystem-level aspects.

Governmental regulations.
In the Netherlands, the financing of support services for residents with intellectual disabilities and challenging behaviour is constrained by various regulations linked to the availability of incidental budgets beyond the regular budget, which in turn is linked to the severity of the challenging behaviour and stability of the staff, as illustrated by this quotation from a manager:

It is incidental and you never know, but half of our budget is incidental budget. And this is not good for business. You want to provide stability and continuity, you don't want to hire them for three years and fire them, but a contract for a longer period is not an option, you do not know what will happen with the incidental budget.

Media attention.
According to participants, the primary roles of media have been to show low-quality support services and to inflate problematic incidents, as a head of group stated:

> *We had an incident in our organisation, which was shown on the news, resulting in contacting parents, Facebook. It became a mutual emphasis on the incapability of our organisation. This was not in accordance with the incident.*

Chronosystem
A few participants mentioned changes over time in the support of persons with challenging behaviour, namely dissatisfaction with the degree of family involvement and the integration of residents into society.

Dissatisfaction with the degree of family involvement.
A psychologist explained recent changes, with fewer tasks for staff in supporting a resident because the involvement of family should increase, with which the family was dissatisfied:

> *R: The family did not take part in supporting the resident, so the staff had taken over and did everything, which they don't do anymore... Yes, now. Fewer tasks are done by the staff, which is not easy.*
> *I: No?*
> *R: Family members have expectations: in the past it was always done by the staff and not by family members, and why has this changed?*

Integration into society.
A head of group explained how staff have new problems in supporting residents because of the integration of residents into society:

> *We have new problems, with the years they grew. Now residents also have computers, want to buy something online or want a mobile. But they are not able to handle the information, for example, they will phone their father who is not able to answer, which causes stress. However, they see other people in the nearby village and are involved with the community. They want to be like them, and they have a mobile.*

3.4. DISCUSSION

This study showed that professionals and managers perceive challenging behaviour in people with intellectual disabilities as related to the organisational environment. According to the

multiple perspectives of managers, heads of group and psychologists, a pattern is formed in which the organisational environment (i.e., vision, values, sufficient resources) is related via the support service (i.e., providing stability, constant awareness) to residents' challenging behaviour, and organisational challenges posed by governmental regulations, media attention and changing societal values. Furthermore, our findings suggest that the organisational environment is related directly to challenging behaviour in people with intellectual disabilities, in addition to the indirect relationships (via support services) described by ecological theory (e.g., with the living environment, shared values). The direct link between the organisational environment and challenging behaviour is in accordance with Gillet and Stenfert-Kroese (2003), who reported that shared values and behavioural norms directly influence the quality of life of residents with intellectual disabilities. These values and norms might provide direction for how to act, think and behave not only for staff members, but also for residents. The reciprocal interactional patterns between all personnel and residents are part of the organisational culture, which directly affects the behaviour (Bigby, Knox, Beadle-Brown, & Clement, 2015) and quality of life (Bigby & Beadle-Brown, 2018) of people with intellectual disabilities. Interventions that focus on the environmental context, instead of the individual, may therefore reduce challenging behaviour among residents more successfully (McGill *et al.*, 2018).

This study helped to unravel a variety of organisational themes associated with support services for people with intellectual disabilities and challenging behaviour and relationships among these themes. It adds value to research in this field, as previous studies investigated limited aspects of the organisational environment, such as leadership or culture, without considering their interconnectedness or influences on challenging behaviour in people with intellectual disabilities (cf. Bigby, Knox, Beadle-Brown, Clement, & Mansell, 2012; Bigby & Beadle-Brown, 2018; Deveau & McGill, 2016; Dilworth *et al.*, 2011). The organisational environmental themes uncovered in this study partially overlap the themes found in a review by Bigby and Beadle-Brown (2018), in which the authors concluded that most studies focused on the quality of staff support and the role of front-line leaders. However, as seen in our study, other themes and their interrelations in the onto-, micro-, meso- and macrosystems require further research.

This study also demonstrated that the exosystem influences the micro- and mesosystems; for example, shared values, the team context and well-matched staff influence the ability to maintain a positive working atmosphere. However, we detected no reciprocal influence of the microsystem on the exosystem (i.e., of seeing residents beyond their challenging behaviours on employees' roles and positions), which may reflect the ease with which employees can explain how they are influenced, relative to how they and their residents influence, the organization.

Limitations

This study has limitations because of its qualitative nature. We gathered data in interviews, which risks the introduction of bias from the interviewer and the participants (i.e., due to social desirability considerations). Second, we studied only the perspectives of professionals and manage-

ment, disregarding those of residents, who might have raised different organisational themes. In addition, the large amount of data collected was difficult to manage, which was complicated by the lack of clear rules on how to extract themes. Furthermore, interviews were conducted at a single point in time, and participants found oversight of the development of the organization and support services to be difficult, resulting in only limited evidence of changes over time in the support of people with challenging behaviour. Fifth, this study was conducted in the Netherlands, which makes generalization to other countries difficult because of the country's unique care situation.

Finally, the use of Bronfenbrenner's ecological theory as the basis for sensitizing concepts also entails limitations. It may have limited our focus, resulting in disregard of themes and relations between systems in the gathered data. The use of a theory from the field of organisational studies, such as the 7 s model (Waterman, Thomas, Peters, & Philips, 1980), to analyse the dynamics of organisational aspects and their interconnectedness in disability service organizations also entails limitations. Such a model could have aided an analysis based on organisational aspects such as staff, skills and shared values. However, the 7 s model is less helpful in examination of the influences of organisational environmental aspects with respect to challenging behaviour in people with intellectual disabilities (onto- and microsystems), given the strong focus on the organization alone. On the other hand, the use of a more detailed concept, such as positive behaviour support (PBS), might also have facilitated data analysis. This concept has shown the importance of a focus on the challenging context in which residents receive support, and not on the challenging behaviour they display (Carr, 2007; Grey & McClean, 2007; McGill *et al.*, 2018). In addition, PBS studies aim to integrate evidence from organisational management, ecological, cultural and positive psychology aspects with biomedical science, which might have provided more structured insight (Carr, 2007). However, PBS as a more detailed concept makes the preconceptions more difficult, and it neglects macro- and chrono- system themes.

These limitations point to the need for further research on the organisational themes detected and the ways in which they can be influenced. Examination of the perspectives of residents and their family members, the use of a longitudinal study design and the adoption of more observational methods would aid our understanding of how organizations and their support services develop and how this development influences challenging behaviour over time.

3.5. CONCLUSION

Overall, the provision of high-quality support to people with intellectual disabilities and prevention of challenging behaviour seem to be complex for residents and employees. The creation of a supportive and positive organisational environment in which staff can provide high-quality support services to residents with demanding care needs is expected to prevent challenging behaviour in people with intellectual disabilities.

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APPENDIX

Interview template

Introduction

What are your name, your role in [this organisation], and your number of working years? If you could name one word associated with your organisation, what would it be? Could you briefly describe your organisation? Could you describe the group home(s) briefly?

Ontosystem, chronosystem (residents)

Could you tell me about the residents who live here?

Microsystem, mesosystem, chronosystem (support services)

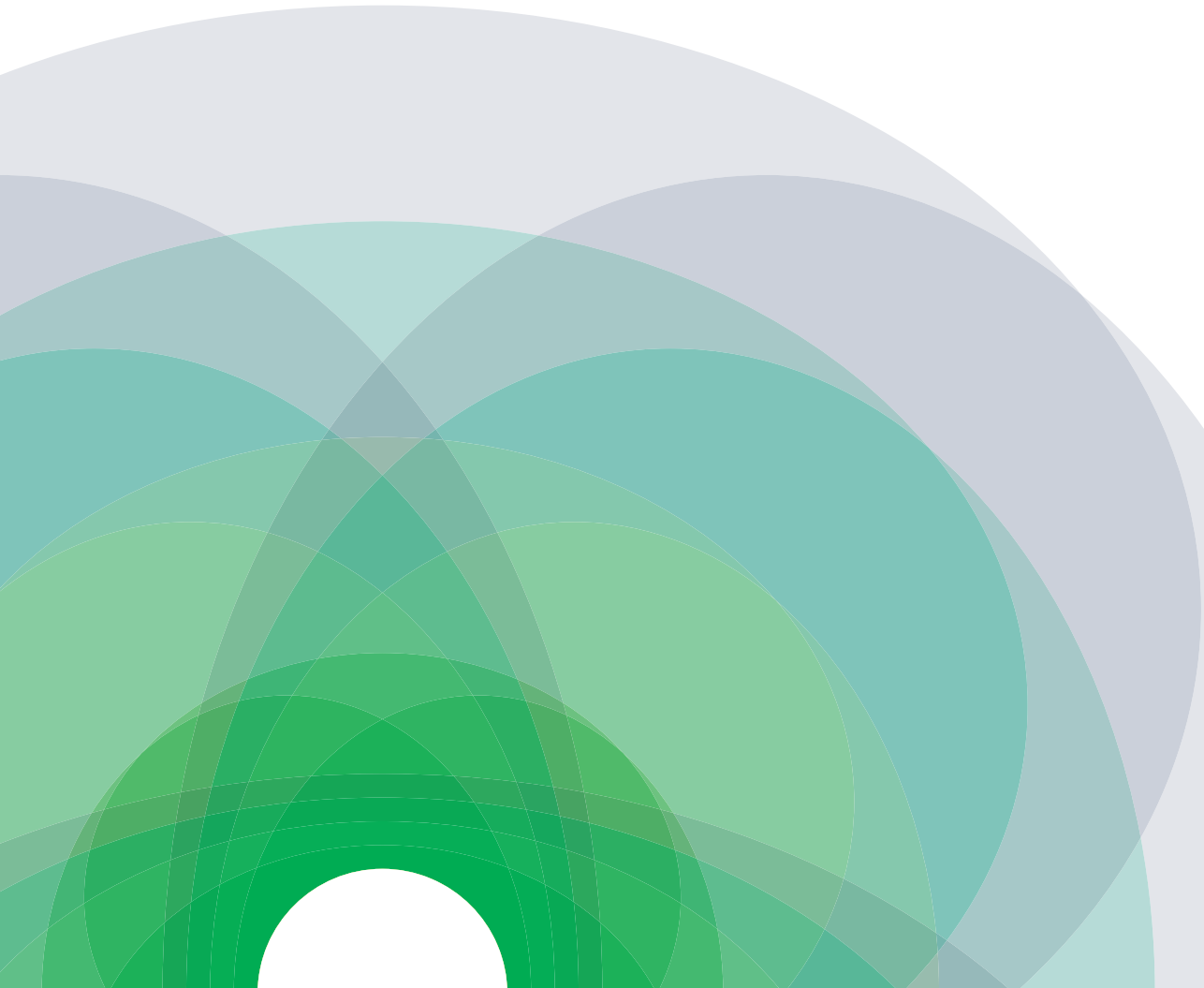
Could you describe the support you provide at this group home? Is there a difference between providing support to people with intellectual disabilities and challenging behaviour and providing support to people with intellectual disabilities without challenging behaviour?

Exosystem, macrosystem, chronosystem (organisational environment)

Could you describe the characteristics of your organisation? How do these characteristics influence your support and the challenging behaviour of residents? Could you describe mechanisms in your organisation that are successful or unsuccessful in preventing challenging behaviour? Now, in the past, and in the future?

Conclusion

Have we discussed everything necessary in this interview? What was essential to you in this interview? How did the interview go? Do you have any tips for the interviewer?



Chapter 4

Residents' and resident representatives' perspectives on the influence of the organisational environment on challenging behaviour.

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ABSTRACT

Background

This study explored the perspectives of residents of residential disability service organisations and resident representatives on the influence of the organisational environment on challenging behaviour in people with intellectual disabilities (ID).

Method

Sixteen residents and representatives from four specialised Dutch disability service organisations were interviewed. Data were analysed using a grounded theory approach, with a sensitising frame based on Bronfenbrenner's ecological theory.

Results

Some organisational factors (e.g. staff turnover, insufficient finances) can have negative effects on interactions among residents and staff and family members, resulting in more challenging behaviour, but other organisational factors (e.g. shared vision, values and expectations, competent staff) can positively influence staffs' attitudes and actions, which in turn helps to manage challenging behaviour in people with intellectual disabilities.

Conclusions

Residents' and representatives' perspectives provide a better understanding of the positive and negative influences of the organisational environment on challenging behaviour in people with intellectual disabilities.

4.1. INTRODUCTION

Challenging behaviour is common in people with intellectual disabilities (ID), and has great impacts on those displaying it and people in contact with them (Emerson, 2001; Hensel, Lunsky, & Dewa, 2014). Bowring and colleagues (2017) reported an 18.1 % overall prevalence of challenging behaviour in people with intellectual disabilities, of whom 7.5 % display self-injurious behaviour, 8.3 % show aggressive/destructive behaviour, and 10.9 % display stereotyped behaviour. Severe challenging behaviour is displayed by 5–10 % of people with intellectual disabilities (Cooper, Smiley, Allan *et al.*, 2009; Cooper, Smiley, Jackson *et al.*, 2009 Lowe *et al.*, 2007). Challenging behaviour is a result of complex social interactions between a person and their environments, and a full understanding of its mechanisms and impacts on a resident of a residential disability service organisation and their social and professional support systems is difficult to gain (Allen *et al.*, 2013; Dilworth, Philips, & Rose, 2011; Emerson & Einfeld, 2011). The professional support system is meant to support residents with intellectual disabilities and challenging behaviour, but limited resources and poorly equipped staff in disability service organisations may result in abuse and inappropriate support provision, which in turn might lead residents to display even more challenging behaviour (Emerson & Einfeld, 2011; Joyce, Ditchfield, & Harris, 2001; Matson & Boisjoli, 2009; White *et al.*,2003).

Studies into positive behaviour support and practice leadership have pointed out that aspects on an organisational level appear to be linked to challenging behaviour, but also need further examination (Allen *et al.*, 2013; Deveau & McGill, 2019; McGill *et al.*, 2018). The NICE guidance (2015) recommends an holistic approach in case of challenging behaviour, including the physical environment, staff communication, social interactions opportunities for residents, management support and guidance by organisational values. A recent literature review showed that the organisational environment, ranging from overall disability policy and budget systems to organisational philosophy, leadership, power structure and working methods to staff beliefs and attitudes, affects challenging behaviour in people with intellectual disabilities (Olivier-Pijpers, Cramm, Buntinx, & Nieboer, 2018). Although such recognition is an important first step, the authors concluded that this influence is highly complex and not easily unravelled. To further our understanding of the mechanisms underlying the organisational environment's effects on challenging behaviour, we need to consider the perspectives of people with intellectual disabilities, who daily experience the support provided by disability service organisations and its triggering of their challenging behaviour. In a study of residents' perspectives, Ruef and Turnbull (2002) found that challenging behaviour among people with cognitive disabilities and/or autism can be caused by inadequate communication by staff, limitation of personal freedom (e.g. being unable to self-select housemates, or to leave the apartment until a staff member has arrived to deactivate the alarm), restrictiveness of the living situation, and disruption in the living environment (e.g. changes in residents' schedules, another resident's loud radio). In a systematic review of residents' experiences with restraint interventions, Heyvaert and colleagues (2015) also concluded that chal-

lenging behaviour is often caused by other residents' behaviour, residents' direct environmental atmosphere, and staff absence, which are influenced by staff shortages, the physical environment, and policies. Staff use restraint interventions in the management of challenging behaviour when this practice is in accordance with the organisational vision and treatment method. However, residents feel that such interventions are unnecessary and not in accordance with their own or staff members' values (Heyvaert, Saenen, Maes, & Onghena, 2014). These studies of residents' perspectives are valuable in understanding the causes and management of challenging behaviour (cf. Heyvaert *et al.*, 2015; Ruef & Turnbull, 2002), but they did not focus specifically on the influence of the organisational environment, and therefore did not investigate *all* potential aspects of this environment known to affect challenging behaviour (e.g. clear operational policies and working methods, concentration of relevant expertise, power structure, leadership, cultural issues) (Olivier-Pijpers *et al.*, 2018).

A theoretical framework that accounts for the complexity of organisational environments of services for people with intellectual disabilities and challenging behaviour is needed. Ecological theory (Bronfenbrenner, 1994, 1979, 1999; Bronfenbrenner & Morris, 2006) can be used to identify mechanisms underlying the organisational environment's effects on challenging behaviour in people with intellectual disabilities (Olivier- Pijpers *et al.*, 2018). Ecological research examining this topic from residents' perspectives, however, remains lacking. The aim of this qualitative study was to explore residents' and resident representatives' perspectives on residential service organisations specialised in providing services for people with intellectual disabilities and challenging behaviour, and the roles of the organisational environment in preventing and managing challenging behaviour, using ecological theory as a sensitising frame (Fig. 1) (Institut National de la Santé et de la Recherche Médicale, 2016).

Residents' ecological environments

According to ecological theory, individual human functioning and development (in this case, challenging behaviour) are the results of complex reciprocal interactions between an active, bio-psychologically developing person (the ontosystem) and the environment, conceived in four nested 'layers': the micro-, meso-, exo-, and macrosystems (Bronfenbrenner, 1994, 1979, 1999; Bronfenbrenner & Morris, 2006). The ontosystem includes a resident's biological dispositions and psychological characteristics (e.g. skills and experiences) (Bronfenbrenner & Morris, 2006; Tudge *et al.*, 2009). The microsystem consists of a resident's social activities and roles, and interpersonal relations in face-to-face interactions with family and staff members. The mesosystem includes interactions between microsystems (e.g. group home and resident's workplace staff, interactions between staff members in a team). The exosystem is the disability service organisation, which consists of relationships between the resident's group home (microsystem) and proximate elements that influence this microsystem, but do not directly influence the resident (i.e. upper management, human resources). The macrosystem consists of cultural characteristics, exhibited in societal rules, laws, funding systems, and attitudes. The chronosystem is a sixth ecological system,

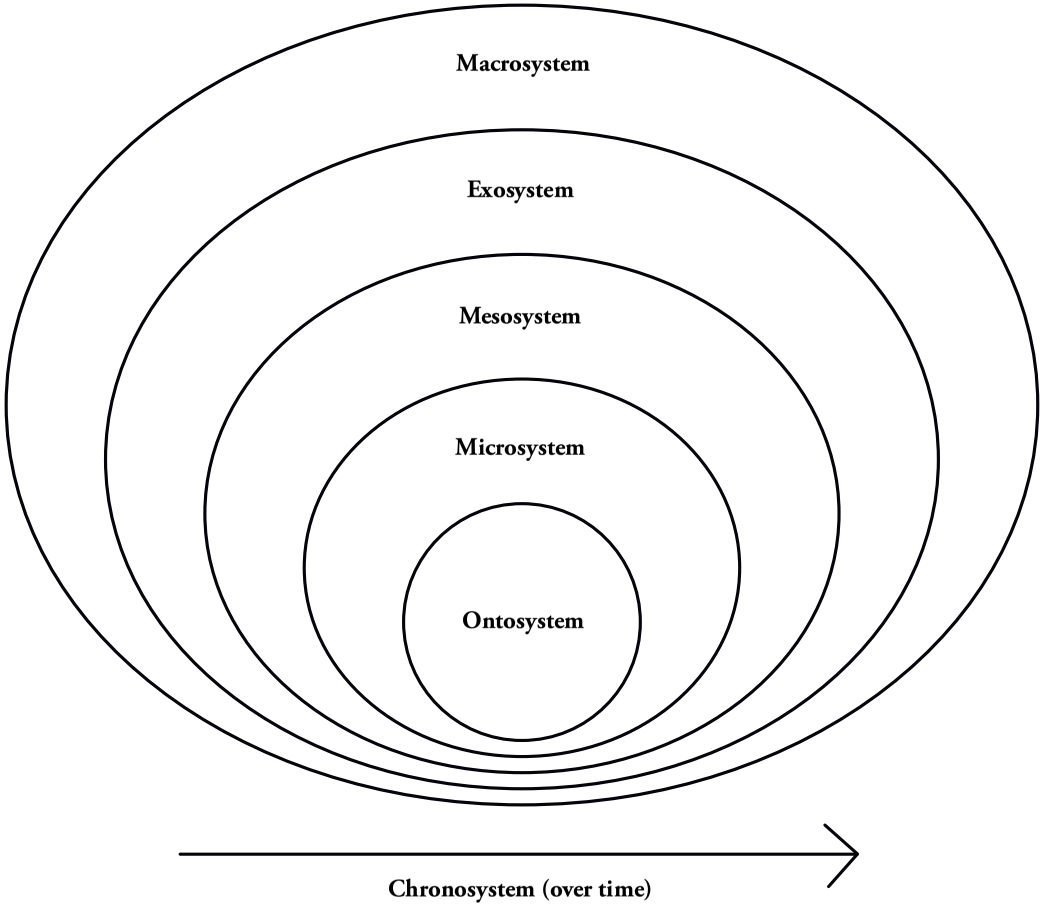

Figure. 1. Ecological model developed by Bronfenbrenner (1994), (1979), (1999); Bronfenbrenner & Morris, 2006) and adapted by the Institut National de la Santé et de la Recherche Médicale (2016, p. 982).

which consists of the changing of the other five systems over time. Based on a comprehensive literature review, Olivier-Pijpers *et al.* (2018) reported that a resident's challenging behaviour (ontosystem) is influenced by staff members' attitudes (microsystem) and positive interactions between staff members (mesosystem), which can be influenced, in turn, by managers' practice leadership (exosystem), which is subject to governmental policies (macrosystem), and finally the resident's behaviour and systems change over time (chronosystem).

4.2. METHOD

Design

We explored the influence of the organisational environment on challenging behaviour in people with intellectual disabilities using a grounded theory approach, which is appropriate when identifying and explaining social processes. We inductively and systematically collected and studied data (Strauss & Corbin, 1990 in Bowen, 2006) with the use of sensitising concepts that reflected ecological theory: ontosystem (residents), micro- and mesosystems (support services), exosystem (organisational environment), macrosystem (society), and chronosystem (changes in systems). These concepts are interpretive devices used to gain a general sense of how to manage data without prescription (Bowen, 2006; Padgett, 2004 in Bowen, 2006). To increase the trustworthiness of this qualitative study, we enhanced the degrees of credibility (e.g. familiarity with the field of ID and challenging behaviour, use of acknowledged methods, use of tactics to encourage participants' honesty), transferability (e.g. clear descriptions of participants and interviews), and dependability and confirmability (e.g. use of a methodology that allows for constant reflectional moments) (Shenton, 2004).

Procedure

The Dutch Central Committee on Research Involving Human Subjects confirmed that this study (MEC-2017-481) did not fall under the scope of the Medical Research Involving Human Subjects Act. Four Dutch specialised disability service organisations participated in this study: located in different regions of the Netherlands, these mid-size organisations (about 1500 residents) support people with mild to severe ID, and provide specialist support for challenging behaviour. An upper manager or psychologist at each service organisation was asked to select adult residents with intellectual disabilities and severe and persistent challenging behaviour or their representatives in different group homes, based on who was able and willing to be interviewed.

Data collection and analysis

During the winter of 2017/2018, interviews were held with residents (n = 8) and representatives (n = 8; two pairs of parents, one sister, one guardian, and two fathers). The first author, an experienced psychologist in the field of ID and challenging behaviour, conducted these in-depth,

open-ended interviews, each of which lasted about 45 min. During the interviews, a topic list based on the sensitising concepts was used; the topics were: 1) general characteristics of the resident, such as age and challenging behaviour (ontosystem); 2) support service aspects, such as staff and group dynamics (micro- and mesosystems); 3) organisational environment aspects, such as the organisation's image, personnel, and societal influence (exo- and macrosystems); and 4) changes (chronosystem). Interviews with residents were conducted with pictograms (e.g. of the group home and staff), and in three cases a staff member was present. Thus, the burden for residents was low (e.g. not causing a high degree of agitation). Interviews were taped, and verbatim transcripts were generated (Boeije, 2002; Bowen, 2006; Dunne, 2011).

Data were read closely, and open codes were applied in an iterative process of constant reflection, memo-ing, and analysis. The constant comparative method was used to continuously search for and analyse themes and their boundaries and relations. This analysis helped to ground the theory, to identify latent patterns in multiple participants' perspectives, and to go beyond the sensitising concepts from ecological theory. Data were analysed in multiple rounds using the Atlas.ti software (version 7; Scientific Software Development, Berlin, Germany) to enhance external validation, and analysis ended when theoretical saturation occurred (Boeije, 2002; Bowen, 2006; Dunne, 2011).

4.3. RESULTS

The residents participating in this study were aged 21–62 years, had mild to severe ID, displayed severe challenging behaviour, and had diagnoses such as autism spectrum disorder, addiction, borderline disorder, and depression. Fig. 2 displays participants' perspectives on the organisational environment's influences on challenging behaviour in people with intellectual disabilities, according to ecological systems.

Ontosystem

The following ontosystem themes were identified: challenging behaviour influences the intensity of support and history of transfer.

Challenging behaviour influences the intensity of support.

According to a resident's mother, residents with more severe ID live in smaller groups because they need more intensive overall support. The intensity of the support given is further adapted by staff during different moments of the day, as the degree and severity of challenging behaviour fluctuate throughout the day. A father explained:

> *Representative (Rep): We wish it was the same support [ed: as given to a person with mild ID] because her support does not seem demanding. However, the staff tell us that supporting her is also difficult. She has moments in which she needs more intensive support.*

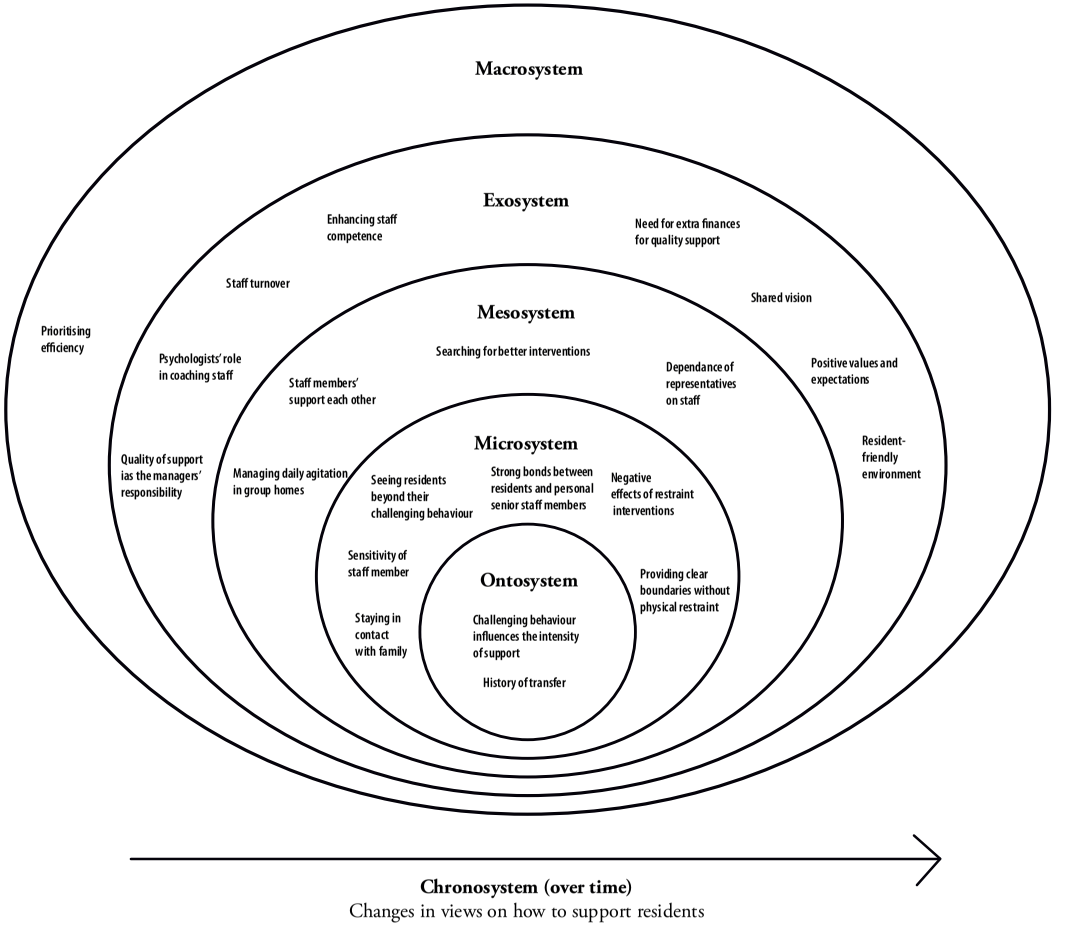

Figure 2. An ecological model of a person with intellectual disabilities and challenging behaviour, as viewed by residents and representatives.

Interviewer (I): Ok?
Rep: She has moments with extreme challenging behaviours. She has these mood swings, and in that moment she will not easily accept support of the staff.

History of transfer.
According to residents and representatives, all residents display extreme challenging behaviours, and have histories of transfer from location to location in one or multiple service organisations because management of their behaviour was too complex. A resident stated:

Resident (Res): I have lived everywhere, that is in and out of prison, in and out of institutions. I now know I have to learn to stay calm. But they have put me in prison, isolation or the insulation room, because I had beaten up someone or done something extreme. A few days ago, I almost did it again [ed: in this group home].

Microsystem
The following microsystem themes were identified: sensitivity of staff member, seeing residents beyond their challenging behaviour, negative effects of restraint interventions, providing clear boundaries without physical restraint, strong bonds between residents and personal senior staff members, and staying in contact with family.

Sensitivity of staff member.
Residents emphasised the importance of staff members' ability to sensitively assist and reassure them during incidents, when their or others' agitation levels are high, to manage challenging behaviour. A resident explained, while looking at his staff member:

Res: This one, here, she keeps me calm.
I: How does she do this?
Res: With her voice.

Seeing residents beyond their challenging behaviour.
According to most representatives, staff members have to take the time to truly understand residents as persons beyond their challenging behaviour, and to figure out how residents should be approached best, instead of only assessing risks due to challenging behaviour. A sister explained:

Rep: They treat him as a person, my brother that is, as a human being. They let him make mistakes and let him try, on his own. It took them a while to support him properly, and not only limit risks because of his behaviours.

Negative effects of restraint measures.
According to several residents and representatives, staff members can use restraint measures to manage challenging behaviour. Some residents emphasised, however, that they disliked being overpowered of locked in by staff. As a resident and his staff member explained:

> *SM: Do you like it when we lock your door, when you are angry?*
> *Res: No!*
> *SM: No?*
> *Res: I do not like it. I mean…it always goes wrong; I will lose my temper and break something in my room. I don't like broken things.*

A guardian further explained the negative effect of using restraint measures:

> *Rep: The problem is, I think, at some point you have a routine, a type of culture of 'Oh well, we see challenging behaviour develop, and react to it with some kind of restraint measure'. How can I explain? You want to prevent further escalation, but the way you act, it is not prevention, it enforces further escalation.*

Providing clear boundaries without physical restraint.
Residents are supported not only by physically strong staff members, but also by staff members who are able to provide residents with clear boundaries for their behaviour without physically restraining them. A father stated:

> *Rep: They are strong guys, fortunately. However, this is not the whole story. In the past we had a small female staff member. My son had respect for her, but he also hit her. But she never moved a millimetre, she seemed not to be negatively affected by his behaviour. And after a while, my son stopped […]. If the strong fellows did not know what to do, they would ask her for assistance.*

Strong bonds between residents and personal senior staff members.
According to residents and representatives, a specific staff member, called a senior staff member, is made responsible by the organisation for each resident's support and treatment. As residents and representatives reported, these staff members provide daily support (e.g. helping residents dress), but also organise various important matters (e.g. finances, leave) in residents' lives, which is vital to residents. A resident explained about trust:

> *Res: If it is really important to me, then I only talk to her [ed: senior staff member]. I will say 'I really need you. It's important, and the others may not help'. If it is not really important, I will ask the other staff members for help.*

Staying in contact with family.

All of the residents and representatives mentioned the importance of their relationships with family, and staying in contact. However, contact between residents and their families is not easy. Sometimes family members need extra support by staff members to be able to enter a resident's room without him or her displaying challenging behaviour. A father stated:

> *Rep: If we visit, there always is a strong [ed: very competent] team present. We adjust our visit to the presence of specific staff members, who are able to support our son properly.*

Mesosystem

The following mesosystem themes were identified: managing daily agitations in group homes, staff members' support of each other, searching for better interventions, and dependence of representatives on staff.

Managing daily agitations in group homes: strict rules or more freedom?

Residents usually live in group homes with 5–11 mostly male residents. Most residents and representatives emphasised that a resident's behaviour does not benefit from another resident's agitation. A guardian explained:

> *Rep: But, fact is, all people who display challenging behaviour should live in a quieter, serene environment. But, unfortunately because they display challenging behaviour, they live together, which is inadequate of course.*

Some residents explained that to limit agitation in the group home, house rules (e.g. regarding chores, food; no aggression), and specific rules for individual residents (e.g. you may go outside) have been established, depending on residents' challenging behaviour and the organisation's treatment method. This conversation with a staff member and resident illustrates the situation:

> *M: Everyone here has their own specific rules. And we have mutual house rules. Res: Yes.*
> *I: Do you know them?*
> *Res: Yes, sure.*
> *I: Are these house rules different from the rules in the previous organisation?*
> *Res: Yes, they differ, yes. It was much stricter, there.*
> *I: Ok?*
> *Res: Yes, it is different. There, for example, cutlery was behind closed doors. Lots of things were behind closed doors to limit risks. That is a difference. Here, you have more freedom. Here, you can say that you want to go to the store or somewhere, or I will get my bike and go off, without restrictions.*

Staff members' support of each other.
Residents and representatives stated that the resident:staff member ratio typically ranges from 6:2 to 1:2, which constitutes intensive support and requires a team of 6–20 staff members. According to several representatives, collaboration among staff members in such teams is essential, as are support and facilitation by the organisation, as reflected in this statement from a mother:

> *Rep: I already told you, they [ed: staff] have to be facilitated, supported. That is necessary. But they also have to support each other, back each other, provide and receive proper feedback. This is very important. They must not have the idea that asking for support from a colleague is wrong.*

Searching for better interventions.
According to representatives, providing proper support for residents with challenging behaviour is difficult. So, staff members have to keep searching for new interventions to manage the challenging behaviour. A mother emphasised that the use of interventions other than those commonly used can start with a single person:

> *Rep: However, the changes for the better did not begin via the organisation, because they thought it would be better. No, it was one person, from within, who said 'This is not sufficient, we have to do it in a different manner'.*

Dependence of representatives on staff.
Representatives try to be present at multidisciplinary (e.g. support-planning) meetings concerning their family members. Nonetheless, the relationship between representatives and staff is always delicate because of the dependence involved. A father explained:

> *Rep: I always say what is on my mind. I am not afraid, however I am…I feel extremely dependent, on the organisation, on the staff. So my wife is more of a critic. And I tell her, you have to be grateful there are people who work here, otherwise you have to take him back home.*

This dependence makes relationships between representatives and senior staff members, who are responsible for the overall support of their family members, even more delicate. A sister explained:

> *Rep: We have demanded that a senior staff member didn't support my brother anymore. They said that they would not alter this, with reasons and so on. Well, my mother and I are a team. She is more emotional and will be furious, and I will explain the facts written down in the support plan. This plan was full of mistakes. I said: 'How can you say this is a dedicated senior staff member? Explain this?' The psychologist tried to explain. At the end of the day the result was: this staff member was taken off his support service.*

Exosystem

Discussion of the exosystem (in this study, the disability service organisation) raised a variety of organisational themes: quality of support is the managers' responsibility, psychologists' role in coaching staff, staff turnover, enhancing staff competence, need for extra finances for quality support, shared vision, positive values and expectations, and a resident-friendly environment.

Quality of support is the managers' responsibility.

Most residents can turn to a manager when in need of help, but the manager mostly organises tasks, such as housing and rostering. A resident described these roles:

> *Res: She organises the house [ed: for rehousing]. Later, she will decide what we will take with us. She will organise this. If there are things which are done properly, or not, she will handle it. She will go to…help will come, for example.*
> *I: Ok, yes?*
> *Res: People will come to help.*

Representatives also perceive managers as accessible persons dedicated to providing quality support services, for example, as persons who monitor staff actions. A mother explained:

> *Rep: [ed: manager]: 'I am here, walk around, notice what is happening, see and hear how the individual staff members interact with residents, and jump in if necessary'. Staff can go to him, in a minute. Contact is friendly. He has an impression of daily practices, and they can discuss this together.*

Psychologists' role in coaching staff.

Residents and representatives stated that each organisation has a psychologist, who has some residents in treatment, but mostly provides comprehensive staff coaching and education. A mother described this role as follows:

> *Rep: The psychologist is responsible for task analyses, plans for challenging behaviour management, the style of the overall support. He explains what a resident needs, what their behaviour means, how to act as a staff member, and how to anticipate certain behaviours as a staff member.*

Staff turnover.

Residents and representatives emphasised that staff turnover is high. One set of parents explained:

> *Mother: He has had thousands [ed: of staff members]. A thousand different ones.*
> *Father: This is common, in every organisation. Every year staff changes, always. They leave by*

themselves or are transferred. Or they can't manage challenging behaviour, because his behaviour is difficult to manage, and in a very complex group home.

Residents are agitated by this turnover, and must constantly build new relationships with staff. One resident explained:

Res: I prefer it when people, who…when it is someone who I know very well...Someone different I will accept for a short moment. Representatives are extremely aware of the possibility that the staff might be insufficient. A father explained:
Rep: There is a huge amount of work to be done, and shortages in staff everywhere. This results in, in my case, I practically lay awake in the night. I think about it sometimes, it can't happen there isn't enough staff.

Enhancing staff competence.
Some representatives emphasised that staff competence can be enhanced by education combined with guidance in daily practice, even if extra resources are needed. A guardian explained:

Rep: More attention for staff is needed, more education, and how do you call it? More peer supervision, in which you reflect on, talk about what you experience in daily practice. However, you have to have more resources to be able to do this….
I: Yes?
Rep: It has to be executed in daily practice. And for this you need extra staff and those other things.

Need for extra finances for quality support.
According to representatives, support services for residents with challenging behaviour depend on finances in addition to the regular budget, and without extra finances the quality of support diminishes. A mother and father explained:

Father: These residents are people with very intensive care. Mother: It is insufficient…
I: No, no?
Father: Oh, you mean the finances to facilitate the support. Mother: Yes, yes, because…
I: Yes?
Father: Yes, of course that is important or else.
Mother: Without, they can't provide intensive support, one staff member supporting one resident. Without it, my son's support will break down.

However, according to a father, attempts to provide more efficient support seem to be an organisational response to insufficient finances, emphasising the negative consequences:

Rep: Efficiency is never beneficial for the resident, because it lessens a resident's time with staff. For example, a resident, like my son, during drinking moments. He has finished his tea or coffee or lemonade, and efficiency-wise you have to walk away. But the resident doesn't benefit, he wants a relaxation moment, a proper tea moment. However, this moment is not a social activity in the day anymore, but becomes a moment in which staff have to provide liquids.

Shared vision.
Several representatives emphasised the need for a shared, clear organisational vision outlining how to support this population (e.g. focus on residents' possibilities instead of challenging behaviour), which helps to focus the support given. A sister stated:

Rep: Look, there is always a greater part of the staff, who has the best intentions, but now I have the impression that they act based upon a shared vision. It is much more deliberate, and even in the beginning we thought what an odd plan [ed: the transfer from individual support to intensive group support].

Positive values and expectations.
Most representatives perceived that the following organisational values were important: respect, safety, and a feeling of happiness, combined with a focus on positive life expectations for residents. A mother explained:

Rep: Keep expectations for their lives. If you quit, you will stop, or go backwards. Have positive expectations for the future, and find out how to get there. And if it is too far to reach, the road you took is gain enough.

Resident-friendly environment.
Organisational settings vary; some are institution like, others are farms or terraced houses. Several residents and representatives emphasised the importance of a resident-friendly neighbourhood with facilities (e.g. sport facilities, shops, dentist). Some buildings have been refurbished in a more resident-friendly manner. A sister expressed her satisfaction as follows:

Rep: You can see it in homes for older people, those hideous tables and chairs, as if those people don't need beautiful stuff. And, the room we're now in, is not an institution-like room. This could have been my place of work, so to speak. So, it went to a more homelike environment, instead of an institutional one.

However, unbreakable materials are required in support services for people with intellectual disabilities and challenging behaviour. A set of parents explained:

Mother: My son has a specially made bed. Very unique, because my son has the patience to remodel his room or furniture, the whole night long. He will…yes, for a long period of time he did not have a bed to sleep in, because every mattress, well.
I: Yes?
Father: No, because if he had a mattress he would find something he could pull.
I: Oh.
Father: He would begin, and the next day there would only be a pile of particle board.

Macro- and chronosystems

The following macro- and chronosystem themes were identified: prioritising efficiency and changes in views on how to support residents.

Prioritising efficiency.
A macrosystem theme, according to some representatives, is the prioritisation of efficiency by the Dutch government, which would influence the organisation of support services. A father explained:

Rep: The government reduces the budgets too much, this means every time making new choices on how to organise support services. It used to be 12 staff members in a team with 7 residents, now it is 8 staff members and 8 residents.

Changes in views on how to support residents.
A chronosystem theme, according to some representatives, is changes in how to support residents. A father stated that there used to be so-called special autism houses instead of children group homes, which he would have preferred for his son. Furthermore, other changes in support services are based on changes in focus. A sister explained:

Rep: Support now has a focus on the positive: what you are able to do, have fun doing, and you may make mistakes. The manager told me once, 'When you live in society, and you do something wrong, you go to prison, but eventually you will leave prison. These people, they haven't left, because we have kept them locked up over the years. Something might go wrong'. This happened with my brother. His whole world became so small, really small…This has changed.

4.4. DISCUSSION

This study shows that the unique perspectives of residents and representatives contribute to our understanding of links between the organisational environment and challenging behaviour in residents with intellectual disabilities. All participants had much to say about the support received

and the organisational environment, which makes clear the importance of involving residents and representatives actively in research whenever possible (Ruef & Turnbull, 2002). The depth and complexity of residents' and representatives' experiences are important factors in efforts to provide better support services and prevent challenging behaviour, but they are not often captured (Griffith, Hutchinson, & Hastings, 2013).

This study provides information on experiences of residents and representatives with specialised support services organised by organisations, which consist of a multitude of interactions with other residents, staff members, and other professionals on whom residents and representatives feel dependent, rendering them even more vulnerable. These interactions are complicated by the power imbalance and direct relationships between residents and staff, and by representatives' emotional dependence in relationships with staff (Griffith & Hastings, 2014; Griffith *et al.*, 2013). Nonetheless, as Doody (2011) concluded, positive interactions between staff and family members and families' knowing staff are essential to provide quality support, in which staff is able to manage challenging behaviour. These interactions also contribute to positive interactions between residents and staff in group homes, resulting in less challenging behaviour (Griffith *et al.*, 2013). Thus, acknowledgement of residents' and representatives' vulnerability and the positivity of interactions among residents, staff, representatives, psychologists, and managers are vital in the prevention of challenging behaviour in people with intellectual disabilities.

This study also demonstrated that ecological theory can aid exploration of residents' and representatives' perspectives on links between the organisational environment and challenging behaviour in people with intellectual disabilities, providing a broader understanding of how challenging behaviour is influenced. Furthermore, the use of ecological theory helped residents and representatives to expand their perspectives, recognising that support services consist of more than direct relations with and actions of staff. The quality of these direct relations, conceptualised as rapport by McLaughlin and Carr (2005), are linked to lesser challenging behaviour. Direct interventions by staff members are important in managing challenging behaviour (Heyvaert, Maes, Van den Noorgate, Kuppens, & Onghena, 2011), but the systems in which these interventions are executed, and how they are structured by organisations, seem to be equally important. Various organisational factors influence support services, and subsequently challenging behaviour of residents, as perceived by the participants. First, participants stated that a shared organisational vision influences staff attitudes and actions, and collaboration between staff members in the management of challenging behaviour, in line with the findings of Griffith *et al.* (2013) and Griffith and Hastings (2014). Second, a high staff turnover rate and limited finances restrict the provision of quality support. To properly manage challenging behaviour, a sufficient, competent staff continuously educated, coached, and monitored by a psychologist and manager is needed, as also reported by others and conceptualised in for example practice leadership or organisational values (Bigby, Clement, Mansell, & Beadle-Brown, 2009; Deveau & McGill, 2016; Mansell, Beadle-Brown, Whelton, Beckett, & Hutchinson, 2008; White *et al.*, 2003). Third, and in accordance with Bigby and Beadle-Brown (2018), the physical environment

and positive organisational values are other prominent factors in the construction of a positive living and working environment for residents and staff, which prevents challenging behaviour. Finally, support quality can deteriorate because organisations choose to let residents live in group homes with others with challenging behaviour, which is stressful for residents and staff and risks the abuse of residents, in line with the findings of Felce, Lowe, and Jones (2002) and White *et al.* (2003). Thus, intervention at the organisational level, instead of solely at the individual level, may prevent or at least improve the management of challenging behaviour in residents, based on residents' and representatives' perspectives. Moreover, individual and organisational factors might influence challenging behaviour differently (Gómez, Pena, Arias, & Verdugo, 2016; Matson & Boisjoli, 2009; McGill *et al.*, 2018; Totsika, Toogood, Hastings, & Lewis, 2008).

Limitations

The qualitative nature of this study imposes some limitations. We used interviews, risking the introduction of interviewee bias due to social desirability considerations (e.g. staff members sometimes supported residents during interviews, and representatives worried about whether they could talk about difficulties they had with the organisation). Secondly, random sampling was not possible because many residents and representatives did not want to be interviewed about the study topic. Reasons given for non-participation were the topic's complexity, residents' agitation prior to interviews, and representatives' belief that others could do a better job. Third, the perspectives of representatives may not account for the manner in which residents with severe intellectual disabilities perceive their organisational environment. This may have biased our findings. In addition, the large amount of data collected was difficult to manage, which was further complicated by the lack of clear rules for theme extraction. Fifth, the situation in The Netherlands differs from those in other countries, but it is not unique, as our results are in accordance with those of previous studies. The use of an ecological model as a sensitising frame also has limitations. The model is constructed for a person who interacts with other persons. However, these other persons also interact with their specific ecological systems, and form dyads and triads with persons not directly linked to the first person's ecological system. Social network theory could have aided the construction of a more flexible model of interactions among all involved and their ecological systems (Borgatti, Mehra, Brass, & Labianca, 2009; Neal & Neal, 2013). Furthermore, ecological theory can aid understanding of dynamic interactions between a person and his or her multiple ecological systems, but these systems consist of very broad and diverse factors and relations, of which the relative importance cannot be determined. Also, these broad insights may limit linking specific themes in this model to other theoretical concepts, such as to concepts as rapport or practice leadership. Lastly, the individual focus may limit understanding of group development in a group home in relation to societal factors (Christensen, 2016).

4.5. CONCLUSION

This study is among the few to examine residents' and resident representatives' perspectives on the organisational environment with respect to challenging behaviour, and it provides unique insights. Participants' perspectives indicate clearly that the organisational environment positively (e.g. shared vision, competent staff) and negatively (e.g. insufficient finances, staff turnover) affects challenging behaviour in people with intellectual disabilities.

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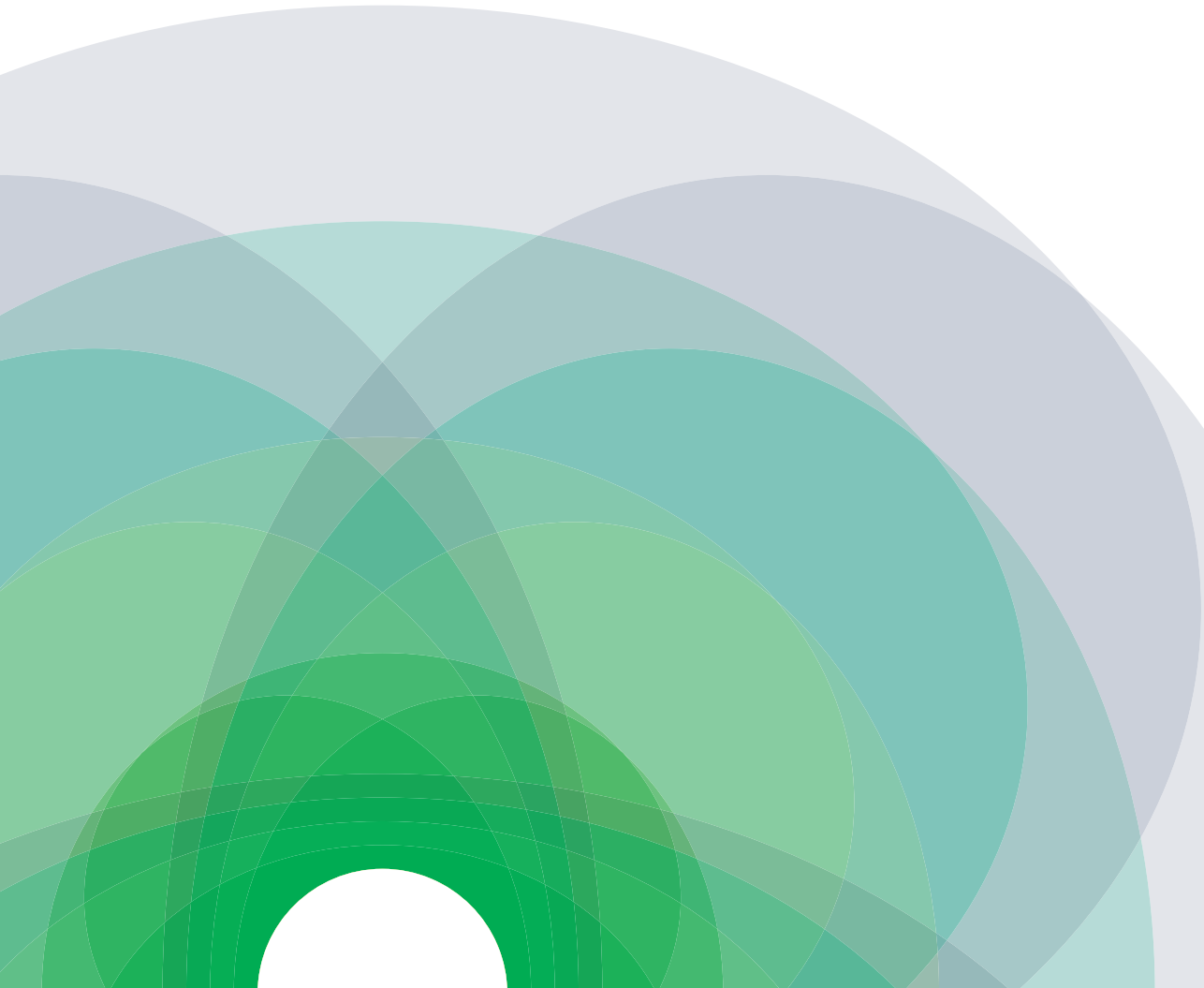

Chapter 5

Cross-sectional investigation of relationships between the organisational environment and challenging behaviours in support services for residents with intellectual disabilities.

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ABSTRACT

Background

This study was conducted to assess relationships between the organisational environment and three types of challenging behaviour (self-injurious, aggressive/destructive and stereotypical) in support services for residents with intellectual disabilities using ecological theory.

Method

A cross-sectional questionnaire-based design was used to identify relationships between ecological system aspects at multiple levels (micro-, meso-, exo-, macro- and chronosystems) and challenging behaviours of residents. A questionnaire was distributed to care professionals and managers working in specialised Dutch service organisations for residents with intellectual disabilities and challenging behaviour. The data were examined by Pearson correlation and multivariate regression analyses.

Results

The questionnaire was completed by 922 respondents from 21 organisations. Responses revealed that organisational aspects at the micro-, meso-, exo- and macrosystem levels play roles in residents' challenging behaviour. These aspects range from staff members' ability to sensitively interact with residents to grouping of residents with challenging behaviour, and staff turnover.

Conclusions

In the prevention and management of challenging behaviour of residents with intellectual disabilities, the consideration of ecological aspects at all system levels in the organisational environment is required.

5.1. INTRODUCTION

Management of the challenging behaviours of residents with intellectual disabilities is an important and complex issue in the provision of residential support services, which can be studied from the perspective of ecological theory (Bronfenbrenner 1979, 1994, 1999; Bronfenbrenner & Morris 2006; Allen *et al*. 2013; Hastings *et al*. 2013; Bigby & Beadle-Brown 2018; Olivier-Pijpers *et al*. 2018). In the residential support context, this theory posits that complex reciprocal interactions between an active, bio-psychologically developing resident (the ontosystem) and his or her environment influence the resident's functioning and development (Bronfenbrenner & Morris 2006). Challenging behaviour is a social construct; in the residential support context, it is the result of a resident's direct interactions with other residents and staff, and indirect relationships with others in the service organisation (Emerson, 2001; Emerson and Einfeld 2011; Allen *et al.* 2013). Emerson (2001) defined challenging behaviour as culturally abnormal behaviour(s) which endangers the physical safety of the person or others, or limits the use of or access to ordinary community facilities. The occurrence of these behaviours reflects the abilities of the immediate and broader environments to properly support people with intellectual disabilities (Royal College of Psychiatrists, 2007, 2016; Allen *et al.*, 2013). According to ecological theory, a resident's environment consists of four nested 'layers': the microsystem (i.e. face-to-face interactions with residents and staff members), the mesosystem (i.e. interactions between microsystems, such as the group home and day-care staff), the exosystem (i.e. interactions within the residential disability service organisation) and the macrosystem (i.e. societal rules, funding systems and attitudes). The chronosystem embodies changes in the five ecological systems over time (Bronfenbrenner 1979, 1994, 1999; Bronfenbrenner & Morris 2006).

Aspects associated with residents' challenging behaviour can be found at all ecological system levels. At the microsystem level, for example, the stability of the relationship between a resident and a staff member results in trust, and subsequently in less stress for the resident, positively influencing challenging behaviour. The anxiety of staff members is linked negatively to residents' challenging behaviour because of the tension it creates in the staff member's actions toward residents (Willems *et al*. 2012; Olivier-Pijpers *et al*. 2018; Olivier-Pijpers *et al*. 2019). The involvement of family members in a resident's daily life and support services may also influence challenging behaviour, as family members are able to advocate for support of the resident's specific needs (Olivier-Pijpers *et al*. 2019). At the mesosystem level, for example, the ability of the staff to manage daily agitations of a given resident and between other residents in the group may influence challenging behaviour, as agitation in the group home can trigger such behaviour. Furthermore, staff members who feel that they are permitted to make mistakes in providing support to residents are better able to learn from these mistakes and adjust their actions in subsequent incidents involving challenging behaviour (Knotter *et al*. 2013; Olivier-Pijpers *et al*. 2019). Exosystem aspects that seem to be associated with challenging behaviour include the management's leadership style, coaching by psychologists, a supportive team environment

for care professionals, a positive organisational culture and the translation of personnel policies into daily practices; all of these aspects provide the staff guidance on proper support of residents, resulting in the occurrence of fewer incidents involving challenging behaviour (Dilworth *et al.* 2011; Allen et al. 2013; Deveau & McGill 2016, 2019; Bigby & Beadle-Brown 2018; McGill *et al.* 2018; Olivier-Pijpers *et al.* 2018; Olivier-Pijpers, *et al.,* 2019). Macrosystem aspects linked to challenging behaviour include negative media attention to bad practices, which results in a focus on control instead of trust of staff members to support residents, in turn negatively influencing challenging behaviour (Olivier-Pijpers *et al.* 2019). Finally, one chronosystem aspect associated with challenging behaviour consists of changing societal views of residents and their support services (e.g. in institutions or the community), which are linked to the way in which an organisation structures support services for residents with intellectual disabilities and challenging behaviour (Tossebro *et al.* 2012; Olivier-Pijpers *et al.* 2018). These ecological system aspects also influence each other; for example, challenging behaviour in residents (ontosystem) is influenced by staff members' sensitivity (microsystem), which in turn is influenced by positive interactions among staff members (mesosystem). These positive interactions are influenced by the organisational vision and management's leadership (exosystem), which are subject to governmental policies and societal values (macrosystem) (Deveau & McGill 2016; Olivier-Pijpers *et al.* 2018; Olivier-Pijpers *et al.* 2019).

Because of the multitude of organisational aspects and interplay among them that influence challenging behaviour, a more in-depth examination of the influences of the organisational environment of support services for residents with intellectual disabilities on staff's attitudes and competencies, and subsequent challenging behaviours of residents, is needed (Gomez *et al.* 2016; Bigby &Beadle-Brown 2018). Previous ecological studies of this organisational environment have been qualitative; quantitative studies are lacking (cf. Gomez *et al.* 2016; Bigby & Beadle-Brown 2018). The aim of this quantitative study was to explore the relationships between the organisational environment and three types of challenging behaviour (self-injurious, aggressive/destructive and stereotypical behaviours) of residents with intellectual disabilities using ecological theory. Using a cross-sectional questionnaire-based design, we measured ecological system aspects on all levels with a large sample of care professionals and managers in Dutch residential disability service organisations.

5.2. METHODS

Setting and procedure

We invited specialised Dutch service organisations for residents with intellectual disabilities and challenging behaviours to participate in this study. Our contact people (administrator of challenging behaviour policies, psychologist or manager in such support services) selected care professionals (group home or day-care staff members and psychologists) and managers (heads

of group and managers) involved with residents with intellectual disabilities and challenging behaviour in these organisations. We tested the sample size with respect to our 37 independent variables with an alpha level of 0.05, power of 0.9 and effect size of 0.2, using XLSTAT 2020.3.1.11, which indicated that a sample of 192 cases was needed. We included organisations with response rates exceeding 25% and 10 cases; such rates are not uncommon for email-based surveys (Sheehan, 2001; Stolzman *et al.*, 2018). We excluded organisations that accepted participation but took no action, and service organisations, care professionals and managers providing support services for residents with intellectual disabilities without challenging behaviour. Reasons given for non-participation included organisations' participation in too many studies and contact persons' inability to recruit sufficient numbers of participants. We also excluded organisations for residents without intellectual disabilities, but with other disabilities; these organisations differ from the disability service organisations in which we aimed to study ecological system aspects of residents with intellectual disabilities and challenging behaviour. Selected respondents received a brief introduction to the study and a link to the Dutch online questionnaire, administered with the Qualtrics software (version XM, 2019; Qualtrics, Provo, UT, USA).

Ethics

The Dutch Central Committee on Research Involving Human Subjects confirmed that this research did not fall under the scope of the Medical Research Involving Human Subjects Act.

Measures

Questionnaire components were validated instruments from the literature and, when no relevant instrument could be found, items were developed based on previous qualitative studies (Olivier-Pijpers *et al*. 2018, Olivier-Pijpers *et al*. 2019). Dutch versions of the Behavior Problems Inventory (BPI-01), Living Group Work Climate Inventory (LGWCI), Staff-Resident Interactive Behaviour Inventory (SCIBI), Family Perceived Involvement (FPI) instrument and Care Staff Attitude Questionnaire (CSAQ) were available and used; the authors translated English versions of the Nursing Home Survey on Patient Safety Culture (NHSPSC), Quality-Work Competence (QWC) questionnaire and Psychosocial Safety Climate (PSC) instrument into Dutch for this study. Scales were constructed based on the mean scores of related items. We also asked respondents to provide descriptive information (e.g. age, education and characteristics of their residents). The complete questionnaire is presented in the Appendix.

Challenging behaviours

Challenging behaviours were measured with the BPI-01 (Rojahn *et al*. 2001; Dumont *et al*. 2014), which is a validated instrument for the assessment of self-injurious (α = .817), aggressive/destructive (α = .995) and stereotypical (α = .909) behaviour in residents with intellectual disabilities. Each respondent answered the questions on challenging behaviour for residents in their group home in order to measure how often they perceive challenging behaviours in their

residents. The instruction was as follows: the next questions are on challenging behaviours which were displayed the last two months by your residents. Self-injurious behaviours consisted of 14 items, for example, frequency of self-biting or inserting objects in nose. Aggressive/destructive behaviours consisted of 10 items, for example, frequency of hitting others or bullying. Stereotypical behaviours consisted of 24 items, for example frequency of rocking as repetitive body movements or waving/shacking hands. Item responses are given on a five-point scale ranging from 'never' to 'every hour'. Higher mean scores indicate more frequent challenging behaviour.

Ecological systems

Table 1 provides an overview of the measures used to assess ecological system aspects. Item responses were given on a five-point scale ranging from 'not applicable' to 'fully applicable', or from 'fully disagree' to 'fully agree'. Higher mean scores indicate a more positive environment or, for the chronosystem, a greater influence of changing views. Cronbach's alpha values for the reliability of these scales ranged from .569 to .995.

Microsystem aspects (anxiety, positive resident–staff interactions, staff member sensitivity, constant awareness, the involvement of family members and staying in contact with family members) were measured using items from the work-environment scale of the LGWCI (Dekker *et al*. 2015; Neimeijer *et al*. 2018); friendly interpersonal behaviour, critical expressed emotion and proactive thinking scales of the SCIBI (Willems *et al*. 2010); and with items of the FPI instrument (Reid *et al*. 2007). Items on the negative effects of restraint measures, provision of stability and central role of a primary staff member were developed for this study (Van Velze, 2010). Mesosystem aspects (supporting your colleague, providing room for mistakes, staff's sense of safety, working method implementation and performance monitoring) were measured using items from the positive team functioning scale of the LGWCI, the non-punitive response to mistakes scale of the NHSPSC (Sorra *et al.* 2008; Castle *et al*. 2011), the organisational communication scale of the PSC instrument (Hall *et al*. 2010; Brondino *et al.* 2012; Bronkhorst 2018) and the efficiency and goals scales of the QWC questionnaire (Arnetz 1997; Arnetz *et al*. 2011). Items on the management of daily agitations and staff members' network and power were developed for this study. Exosystem aspects (allowing staff to explore, manager's practice leadership, psychologist's coaching of staff, team context, mission statement, vision guiding practice, staff perceptions and values regarding residents' abilities and behaviour, control versus trust – participation, control versus trust – proactive behaviour, and personnel policies in daily work) were measured with the competence development, participation, proactive behaviour, performance feedback and leadership scales of the QWC; items from the leadership, task significance, and shared vision and commitment scales of the LGWCI; and items from the CSAQ (Rose *et al*. 2006). Items on staff turnover, understaffing, finding a good match, authentic leadership, grouping, the living environment and (a greater need for) extra financial means were developed for this study. Response options for the latter items were 'yes' and 'no'. Items for the macrosystem aspects disability policies, deinstitutionalisation and media attention, and the chronosystem aspect service development based on changing views, were developed for this study.

Table 1 Ecological system aspects examined in this study, with mean scores

Ecological system aspect	No. of items	Cronbach's α	Example item	Score
Microsystem: resident–staff member interaction				
Anxiety	4	.703	The quality of the staff member's work is influenced by the staff member's fear.	3.33 ± .747
Negative effects of restraint measures	2	N/A	The use of restraint measures can lead to the exacerbation of challenging behaviour.	3.34 ± .877
Providing stability	3	.569	At our location, residents regularly have to deal with substitutes they don't know.	3.48 ± .734
Central role of a primary staff member	6	.882	At our location, there is a strong mutual bond between a primary staff member and the resident.	4.05 ± .520
Positive resident–staff interaction	5	.828	At our location, staff members appreciate all residents.	4.00 ± .504
Sensitivity of staff members	4	.830	At our location, staff members listen to what the resident has to say or shows through behaviour.	3.86 ± .614
Constant awareness	3	.890	At our location, staff members constantly consider why they will do given things with the resident.	3.86 ± .614
Staying in contact with family	3	.674	At our location, relatives have contact with resident family members by phone, visits, etc.	3.16 ± .749
Involvement of family	3	.661	At our location, relatives are informed about changes in resident family member's care plan.	4.07 ± .542
Mesosystem: staff team				
Managing daily agitations	1	N/A	At our location, we work in a repressive/overcontrolling way.	2.78 ± 1.03
Staff members' network and power	3	.781	At our location, there is conflict between (groups of) staff members.	2.14 ± .761
Support of colleagues	5	.882	At our location, the decisions of colleagues are supported and well executed.	3.97 ± .547
Providing room for mistakes	5	.815	At our location, staff members feel safe when reporting mistakes.	4.04 ± .548
Staff's sense of safety	4	.899	At our location, we pay attention to the sense of safety of colleagues.	4.04 ± .655
Implementation of working methods	6	.787	At our location, staff members put (treatment/guidance) method(s) into practice.	3.75 ± .537
Performance monitoring	4	.864	At our location, goals are evaluated.	3.91 ± .540
Exosystem: organisational environment				
Staff turnover	1	N/A	At our location, there is a large amount of staff turnover.	3.06 ± 1.26
Understaffing	1	N/A	At our location, there is a shortage of staff.	3.14 ± 1.14
Allowing staff to explore	4	.897	At our location, the different competencies of staff members are used in the work we do.	3.77 ± .695
Finding a good match	3	.751	When hiring new staff members, we look at the match with the psychologist/manager supporting the location.	3.43 ± .846
Practice leadership – manager	11	.867	The manager at our location makes staff members aware of important common values and ideals.	3.79 ± .614

Table 1 Ecological system aspects examined in this study, with mean scores (continued)

Ecological system aspect	No. of items	Cronbach's α	Example item	Score
Psychologist's coaching of staff	11	.910	The psychologist at our location shows how you can view problems from different perspectives.	3.66 ± .735
Team context	4	.755	At our location, experts (doctors, occupational therapists, psychiatrists, etc.) give practical advice to staff members.	3.66 ± .735
Authentic leadership	3	.911	The Director/Board of Directors communicates and does what they say they are going to do.	3.84 ± .842
Mission statement	3	.771	A shared sense of cooperation on an important assignment/mission is fostered by the manager of the location.	3.72 ± .605
Vision guiding practice	4	.716	Everything we do within the organisation is in line with the organisation's vision.	3.72 ± .845
Grouping	1	N/A	Residents with challenging behaviours are placed in the same group homes as much as possible.	3.45 ± 1.05
Staff perceptions and attitudes toward residents' abilities and behaviour	4	.765	I believe that every resident can learn something.	4.24 ± .504
Control versus trust –participation	3	.844	I can influence decisions about my work.	3.95 ± .651
Control versus trust – proactive behaviour	4	.885	I look for ways to improve the work we do.	4.27 ± .480
Personnel policies in daily work	5	.885	It is clear to me what is expected of me in my work.	3.88 ± .681
Resident-friendly physical environment	3	.842	The interior of the location is resident- friendly.	3.76 ± .888
Need for extra financial means	6	.674	Is extra funding needed in the provision of support to residents with challenging behaviour for replacing materials?	4.08 ± 2.11
Macrosystem: society				
Disability policies	4	.785	I can apply governmental policies in daily practice.	3.50 ± .638
Deinstitutionalisation	1	N/A	My organisation is actively engaged in reverse integration and/or integration into the society or the neighbourhood.	3.40 ± 1.00
Media attention	1	N/A	Media coverage of residents with challenging behaviours is negative.	3.46 ± .766
Chronosystem: changes				
Service development based on changing views	7	.837	My work was influenced by the change in the type of support provided from takeover to activation.	3.46 ± .665

Scores are presented as means ± standard deviations.

Statistical analysis

The statistical analyses were performed with the SPSS software (version 26; IBM Corporation, Armonk, NY, USA). Descriptive statistics were used to explore ecological system aspects and outcome variables (self-injurious, aggressive/destructive and stereotypical behaviours). The relationships between the organisational environment and challenging behaviours were examined with Pearson correlation analysis (Mackridge and Rowe 2018). All ecological system aspects that correlated significantly ($p < .05$) with challenging behaviour were entered into a multivariate regression analysis, conducted with pairwise deletion of missing cases. We examined multilevel effects of the ecological system aspects that correlated significantly ($p < .05$) with challenging behaviour in the Pearson correlation, using a Mixed model with fixed effects conducted with listwise deletion of missing cases. We tested for the influence of the organisational level (level 2) on the outcome measures (self-injurious, aggressive/destructive and stereotypical behaviours). As the organisational level significantly affected self-injurious behaviour (–2 log likelihood 5289.570 vs. 5174.372; $p < .001$), aggressive/destructive behaviour (–2 log likelihood 5374.562 vs. 5279.230; $p < .001$) and stereotypical behaviour (–2 log likelihood 6181.950 vs. 6123.492; $p < .001$), we employed hierarchical regression analyses.

5.3. RESULTS

Of 36 organisations invited to take part in this study, 21 ultimately participated. These organisations are situated in all regions of the Netherlands, and differ in size and histories. In total, 922 of 2543 care professionals and managers filled in the questionnaire (36% response rate). The majority of respondents were female (86%), worked about 20–32 and >32 hours per week (50% and 46%, respectively) and had been employed by the organisations for about 4 years (69%). Respondents supported primarily residents with severe to profound intellectual disabilities and combinations of challenging behaviours (Table 2). Mean BPI-01 scores for self-injurious, aggressive/destructive and stereotypical behaviour were 16.21 ± 6.11, 21.62 ± 7.24 and 32.52 ± 13.13, respectively.

Mean scores for ecological system aspects are provided in Table 1. Table 3 shows correlations between these aspects and types of challenging behaviour, structured by ecological system level. At the microsystem level, the stability of resident–staff relationships and positive resident–staff interactions correlated with less self-injurious ($r = –.113$ and $–.097$, $p < .01$ and $<.05$), aggressive/destructive ($r = –.211$ and $–.147$, both $p < .001$) and stereotypical ($r = –.139$ and $–.097$, $p < .001$ and $< .05$) behaviour. The central role of a primary staff member in resident support correlated with less self-injurious ($r = –.092$) and aggressive/destructive ($r = –.089$) behaviour (both $p < .05$). The sensitivity of staff members correlated with less aggressive/destructive ($r = –.079$) and stereotypical ($r = –.086$) behaviour (both $p < .05$). Awareness of the negative effects of restraint measures was associated with less stereotypical behaviour ($r = –.075$, $p < .05$).

Table 2 Percentages of respondents supporting different groups of residents

Resident characteristic	Percentage of respondents supporting at least one such resident
Mild intellectual disability	56%
Moderate intellectual disability	56%
Severe to profound intellectual disability	80%
Physical aggression	86%
Destructive aggression	76%
Verbal aggression	86%
Self-injurious behaviour	54%
Sexually problematic behaviour	52%
Stereotypical behaviour	75%
Reactive challenging behaviour	62%
Criminal activity or addictive behaviour (societally challenging behaviour)	37%
Severe anxiety and apathy	67%

Table 3 Pearson correlations and regression associations between ecological system aspects and challenging behaviour of residents with intellectual disabilities

Ecological system aspect	Self–injurious behaviour	Aggressive / destructive behaviour	Stereotypical behaviour
Regression constant (B)	11.31**	6.39	24.70**
Microsystem: resident–staff member interaction			
Anxiety	.019	.064	.066
Negative effects of restraint measures: hard on residents	–.061 (–.018)	.045 (.069)	–.075* (–.048)
Negative effects of restraint measures: challenge residents' behaviour	–.007	.033	–.007
Providing stability	–.113** (.023)	–.211*** (–.047)	–.139*** (–.013)
Central role of a primary staff member	–.092* (–.055)	–.089* (–.039)	–.072 (–.013)
Positive resident–staff interaction	–.097* (–.035)	–.147*** (–.129*)	–.097* (.008)
Sensitivity of staff members	–.055 (.139*)	–.079* (.150*)	–.086* (.043)
Constant awareness	.008	–.027	–.018
Staying in contact with family	.015	.021	.014
Involvement of family	.070	–.016	.055
Mesosystem: staff team			
Managing daily agitations	–.016	.025	–.002
Staff members' network and power	.177*** (.159**)	.209*** (.159**)	.185*** (.158**)
Support of colleagues	–.119** (–.022)	–.113** (.057)	–.125** (–.032)
Providing room for mistakes	–.091* (.044)	–.106** (.028)	–.092* (.046)
Staff's sense of safety	–.091* (.012)	–.086* (–.034)	–.083* (.033)
Implementation of working methods	–.119** (–.014)	–.139*** (–.018)	–.129** (–.022)
Performance monitoring	–.053	–.075	–.070

Table 3 Pearson correlations and regression associations between ecological system aspects and challenging behaviour of residents with intellectual disabilities (continued)

Ecological system aspect	Self–injurious behaviour	Aggressive / destructive behaviour	Stereotypical behaviour
Exosystem: organisational environment			
Staff turnover	.117** (–.039)	.175*** (.038)	.143*** (.025)
Understaffing	.169*** (.108)	.181*** (.055)	.146*** (.040)
Allowing staff to explore	–.049	–.064	–.066
Finding a good match	–.145*** (–.105*)	–.076 (.002)	–.133** (–.088)
Practice leadership – manager	–.122** (–.001)	–.087* (.017)	–.108** (.004)
Psychologist's coaching of staff	–.065	.017	–.047
Team context	.053	–.035	.010
Authentic leadership	–.118** (.005)	–.123** (–.009)	–.110** (.004)
Mission statement	–.097	–.049	–.075
Vision guiding practice	–.048* (.018)	.018 (.036)	–.037 (.013)
Grouping	.085* (.074)	.230*** (.179)	.131** (.133)
Staff perceptions and attitudes toward residents' abilities and behaviour	.010	.049	.048
Control versus trust – participation	–.021	.003	–.031
Control versus trust – proactive behaviour	.051	.077	.077
Personnel policies in daily work	–.044	–.052	–.034
Resident-friendly physical environment	–.033	–.078	–.047
Need for extra financial means	.179*** (.116*)	.281*** (.186)	.137** (.043)
Macrosystem: society			
Disability policies	–.006	–.005	.013
Deinstitutionalisation	–.211*** (–.172***)	–.116** (–.114***)	–.182*** (–.162***)
Media attention	–.014	.032	.010
Chronosystem: changes			
Service development based on changing views	–.130** (–.054)	–.041 (–.023)	–.091* (–.019)
F	3.974***	6.027***	3.321***
Adjusted r^2	.092	.146	.073

Data are presented as *r* (*β*). *p < .05, **p < .01, ***p <.001.

At the mesosystem level, a negative power balance in the staff network correlated with more self-injurious (r = .177), aggressive/destructive (r = .209) and stereotypical (r = .185) behaviour (all p < .001). Support of colleagues, staff's sense of safety and working method implementation (provision of support with clear goals and goal evaluation, and according to specific treatment methods) correlated with less self-injurious (r = –.091 to –.119, p < .05 to .001), aggressive/destructive (r = –.086 to –.139, p < .05 to < .001) and stereotypical (r = –.083 to –.129, p < .05 to < .01) behaviour. Providing room for mistakes correlated with less aggressive/destructive behaviour (r = –.106, p < .01).

At the exosystem level, understaffing, staff turnover, grouping of residents with challenging behaviour and the need for extra financial means correlated with more self-injurious (r = .085 to .179, p < .05 to < .001), aggressive/destructive (r =.175 to .281, all p < .001) and stereotypical (r = .131 to .146, p < .01 to < .001) behaviour. Managers' practice leadership and authentic CEO leadership correlated with less self-injurious (r = –.122 and –.118, both p < .01), aggressive/destructive (r = –.087 and –.123, p < .05 and < .01) and stereotypical (r = –.108 and –.110, p < .01) behaviour. Good matching of staff, other professionals, managers and residents correlated with less self-injurious (r = –.145, p < .001) and stereotypical (r = –.133, p < .01) behaviour. Vision-based guidance of the staff's daily work practices correlated with less self-injurious behaviour (r = –.097, p < .05).

At the macrosystem level, community/societal integration (deinstitutionalisation) correlated with less self-injurious (r = –.211, p < .001), aggressive/destructive (r = –.116, p < .01) and stereotypical (r = –.182, p < .001) behaviour. At the chronosystem level, service development based on changing views correlated with less self-injurious (r = –.130, p < .01) and stereotypical (r = –.091, p < .05) behaviour.

The multivariate regression analysis revealed the following associations related to decreased challenging behaviour: positive resident–staff interaction with less aggressive/destructive behaviour (β = –.129, p < .05); sensitivity of staff members with less self-injurious (β = .139) and aggressive/destructive (β = .150) behaviour (both p < .05); good matching of staff, other professionals, managers and residents with less self-injurious behaviour (β = –.105, p < .05); and deinstitutionalisation with less self-injurious (β = –.172), aggressive/destructive (β = –.114) and stereotypical (β = –.162) behaviour (all p < .001). A negative power balance in the staff network was associated with more self-injurious (β = .159), aggressive/destructive (β = .159) and stereotypical (β = .158) behaviour (all p < .01), and a greater need for extra financial means was associated with more self-injurious behaviour (β = .116, p < .05; Table 3).

The multilevel analysis revealed the following significant estimates of fixed effects related to challenging behaviours (Table 4). Positive resident–staff interactions with less aggressive/destructive behaviours (β = –2.16, p < .05). Staff member sensitivity with more aggressive/destructive behaviours (β = 2.19, p < .05). Staff members' network and power with more self-injurious (β = 1.09, p < .01), aggressive/destructive (β = 1.68, p < .001) and stereotypical behaviours (β = 2.39, p < .01). Grouping with more stereotypical behaviours (β = 1.26, p < .05). Staff turnover with more self-injurious behaviours (β = .569, p < .05). Need for extra financial means with more self-injurious (β = .406, p < .01) and aggressive/destructive behaviours (β = .588, p < .001). Deinstitutionalisation with less aggressive/destructive behaviours (β = –.789, p < .05).

Table 4 Multi level associations between ecological system aspects and challenging behaviour of residents with intellectual disabilities

Ecological system aspect	Self–injurious behaviour	Aggressive / destructive behaviour	Stereotypical behaviour
Constant	14.31*** (3.94)	13.52** (4.47)	31.17*** (8.39)
Microsystem: resident–staff member interaction			
Negative effects of restraint measures: hard on residents	–.271 (.256)	.321 (.291)	–1.03 (.548)
Providing stability	–.080 (.478)	–.849 (.542)	–1.30 (1.02)
Central role of a primary staff member	–.365 (.573)	.028 (.653)	.369 (1.23)
Positive resident–staff interaction	–.366 (.717)	–2.16** (.817)	–.505 (1.54)
Sensitivity of staff members	.785 (.688)	2.19** (.783)	.569 (1.48)
Mesosystem: staff team			
Staff members' network and power	1.095** (.384)	1.68*** (.437)	2.39** (.819)
Support of colleagues	–.467 (.693)	.377 (.790)	–.647 (1.48)
Providing room for mistakes	.433 (.688)	–.013 (.784)	–.310 (1.13)
Staff's sense of safety	.041 (.527)	–.277 (.600)	–.083 (.033)
Implementation of working methods	–.933 (.662)	.637 (.754)	1.33 (1.41)
Exosystem: organisational environment			
Staff turnover	.569* (.275)	.316 (.312)	.405 (.587)
Understaffing	–.214 (.313)	.237 (.354)	.006 (.664)
Finding a good match	–.316 (.324)	.124 (.369)	–.529 (.694)
Practice leadership – manager	–.440 (.506)	–.120 (.576)	–.277 (1.08)
Authentic leadership	–.144 (.386)	–022 (.440)	–.337 (.824)
Vision guiding practice	.129 (.625)	.650 (.711)	.936 (1.33)
Grouping	.181 (.287)	.634 (.326)	1.26* (.614)
Need for extra financial means	.406** (.132)	.588*** (.150)	.448 (.282)
Macrosystem: society			
Deinstitutionalisation	–.412 (.299)	–.789* (.339)	–.664 (.639)
Chronosystem: changes			
Service development based on changing views	–.572 (.411)	–.728 (.468)	–.640 (.878)

Data are presented as *ß(S.E)*. $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$.

5.4. DISCUSSION

This quantitative study showed that aspects of the organisational environment of support services for residents with intellectual disabilities at four ecological system levels (the micro-, meso-, exo- and macrosystems) play a role in residents' challenging behaviour, as perceived by care professionals and managers. In the multivariate analysis, no chronosystem-level aspect was related significantly to residents' challenging behaviour.

On the microsystem level, positive resident–staff interactions and the sensitivity of staff members were related to the challenging behaviour of residents. Positive and sensitive relationships between residents and staff members seem to be beneficial for residents' feelings of belonging and being valued, which reduces their loneliness and isolation and, thus, their challenging behaviour (Bigby *et al.*, 2015; Ratti *et al.*, 2016; Scheffelaar *et al.,* 2018). Mansell and colleagues (2008) and Allen and colleagues (2013) add that constant extra training of care professionals is needed to truly provide resident focused support, and their previous professional education is the base for generalising newly learned skills in training into daily practices. However, higher sensitivity in staff seems to be associated with more aggressive/destructive behaviours, it may be that staff who are more sensitive signal more challenging behaviours, but are also more able to manage these without a restrictive and controlling support style (Olivier-Pijpers, Cramm, & Nieboer, 2020).

On the mesosystem level, a proper power balance and staff network was linked to challenging behaviour. This finding is in line with the work of Gillett and Stenfert-Kroese (2003) and White *et al.* (2003), who found that negative power dynamics and power imbalances in staff teams and network play large roles in whether teams feature negative social pressure, resulting in inappropriate working relationships among staff members. These relationships negatively affect resident–staff interactions, influencing residents' challenging behaviour (Gillett & Stenfert-Kroese, 2003; White *et al.*, 2003; Bigby *et al.*, 2015). Our findings are partly in line with those of healthy workplace studies conducted in health organisations, which have shown that positive work climates and the prioritisation of clear goals and tasks in teams are essential for the prevention of staff stress and the enhancement of organisational efficacy in supporting residents, thereby diminishing incidents with challenging behaviours (Arnetz & Blomkvist, 2007; Lindberg & Vingard, 2012; Josefsson *et al.*, 2018).

At the exosystem level, the organisational vision on grouping of residents with challenging behaviours with other residents with challenging behaviours in a group home is linked to challenging behaviours. White and colleagues (2003) add that residents in these groups are at greater risk of abuse by staff members. More homogeneous groups comprised only of residents with challenging behaviours seem to be supported by staffs that are less diverse and have lower educational levels, as staff members for these groups are difficult to find. In contrast, more heterogeneous groups seem to be supported by staffs who provide less and inefficient support because more time is spent planning and arranging individual residents' activities according to the person-centred approach (Felce *et al.,* 2002; Mansell *et al.*, 2008; White *et al.*, 2003). Ratti and colleagues (2016) concluded in a systematic review that the effectiveness of person-centred planning is uncertain, as its implementation depends on changes in organisation members' attitudes, values and competencies, which is difficult, limiting challenging behaviour management by staff.

Also, on the exosystem level, staff turnover of direct staff members and need for extra financial means is associated with challenging behaviours. In addition to sufficient staff and financial resources, Bigby and Beadle-Brown (2018) emphasised the importance of proper front-line management and human resources policies and practices in order to provide guidance to staff

to be able to enhance residents' quality of life, which in turn may influence their challenging behaviour (Josefsson *et al*. 2018; Deveau & McGill, 2019).

On the macrosystem level, deinstitutionalisation was associated with the reduction of residents' challenging behaviour. Graham *et al*. (2013) argued that the living of a normal life and engagement in society are crucial for residents with intellectual disabilities receiving support services. Residents' engagement in positive and respectful relationships and meaningful involvement with others in society may improve some domains of quality of life and diminish challenging behaviour, as seen in studies of positive behaviour support (Bigby & Beadle-Brown, 2018; McKenzie *et al*., 2018). Chowdhury and Benson (2011) stated that deinstitutionalisation should also entail changes in other domains of residents' quality of life, such as increased control in daily life (choice and autonomy) and in their financial and employment statuses (material well-being).

On the chronosystem level, support service development based on changing societal views was not linked to challenging behaviour. Changing views on people with intellectual disabilities are, for example, supported by the United Nations Convention on the Rights of People with Disabilities (United Nations, 2006), which is legally binding and requires countries to promote, protect and ensure the rights of all persons with disabilities. Hamlin and Oaks (2008) stated that changing views, such as the shift in rights of people with disabilities and from a preference for hospitalisation to deinstitutionalisation, are difficult to effect and to link to residents' challenging behaviour (Bigby *et al*., 2009). The restructuring of support service organisations based on changing societal views may not be related directly to challenging behaviour, but changes in discourse on aspects such as resident–staff relationships (emphasising the protection, power and humanity of residents) may influence these behaviours (Hamlin & Oaks, 2008).

Limitations

Several limitations of this study need to be acknowledged. First, the overall response rate was lower than expected, which could have biased our findings (Mutepfa & Tapera 2019). Some respondents stated that their workloads and/or the prioritisation of other activities prevented them from completing the questionnaire. Thus, respondents who manage more frequent and severe challenging behaviours of residents may be underrepresented in our sample. In addition, most participants were staff members and psychologists; managers are underrepresented in our sample, which may have narrowed the scope of perspectives represented in our data. Second, all data were gathered using self-report questionnaires, which may have resulted in social desirable answers or difficulties in recalling of some of the aspects. Future studies should employ observational methods to explore aspects influencing residents' challenging behaviour in natural settings. Third, we did not use the BPI to assess a clinical level of challenging behaviours in residents, but used it to gather information on how often respondents perceive challenging behaviours in their residents. This may have limited our findings. Fourth, we only found weakly significant relationships of study variables with challenging behaviour, which may have resulted from the examination of a multitude of aspects, all of which may influence challenging behaviour alone

and in interaction with each other. We recommend longitudinal examination of the relationships revealed in this study, these relationships may be dynamic and aspects may change over time. Fifth, further research on the perspectives of residents and their representatives regarding ecological system aspects in relation to residents' behaviours is recommended, as it would provide another perspective on the organisational environment. Furthermore, the combined analysis of different types of challenging behaviour may provide supplementary insight, as these behaviours are dependent on each other.

5.5. CONCLUSION

Using ecological theory, this quantitative study showed that organisational aspects at the micro-, meso-, exo- and macrosystem levels influence the challenging behaviour of residents with intellectual disabilities. Thus, proper prevention and management of the challenging behaviour of such residents requires the investigation of aspects at all system levels of the organisational environment, and interrelationships among them.

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APPENDIX

Questionnaire items used in this study, with annotation

LGWCI, Living Group Work Climate Inventory; SCIBI, Staff-Resident Interactive Behaviour Inventory; FPI, Family Perceived Involvement; NHSPSC, Nursing Home Survey on Patient Safety Culture; PSC, Psychosocial Safety Climate; QWC, Quality-Work Competence; CSAQ, Care Staff Attitude Questionnaire.

Ecological system aspect	Source
Microsystem: resident–staff member interaction	
Anxiety	Work-environment scale of the LGWCI (Dekker *et al.* 2015), based on expert consensus and validated questionnaires, developed for use with care and treatment facility (group home) staff teams responsible for supporting positive, open living group climates.
Negative effects of restraint measures	No scale; items based on previous qualitative studies.
Providing stability	Scale based on previous qualitative studies.
Central role of a primary staff member	Scale based on a psychological conceptual framework (Van Velze 2010) with themes such as trust, feeling safe, warmth and empathy, predictability, acting in residents' best interest, and strong reciprocal relationships.
Positive resident–staff interaction	Friendly interpersonal behaviour scale of the SCIBI (Willems *et al.* 2010), a validated self-report questionnaire measuring staff inter/intrapersonal behaviour toward residents with intellectual disabilities and challenging behaviour.
Sensitivity of staff members	Critical expressed emotion SCIBI scale.
Constant awareness	Proactive thinking SCIBI scale.
Staying in contact with family	Items from the FPI instrument (Reid *et al.* 2007), a validated questionnaire measuring family perceived involvement in care for people with dementia residing in long-term care facilities.
Involvement of family	FPI questionnaire items.
Mesosystem: staff team	
Managing daily agitations	No scale; based on previous qualitative studies.
Staff members' network and power	Scale based on previous qualitative studies.

Items
The staff member is extra cautious in his or her contact with the resident when he or she has experienced an incident with a resident.
The staff member is extra cautious in contact with the resident when the resident has a complex resident dossier.
The support provided to residents is influenced by staff members who feel afraid at the location.
The quality of the staff member's work is influenced by the staff member's fear.
The use of restraint measures is irritating for residents.
The use of restraint measures can lead to the exacerbation of challenging behaviour.
At our location, most of the residents have known most of the staff members for a long time.
At our location, residents regularly have to deal with substitutes they don't know.
At our location, residents are supported by a manageable number of staff members for the resident.
At our location, residents trust their primary staff member.
At our location, residents feel safe with their primary staff member.
At our location, the primary staff member is warm and sympathetic toward his or her resident.
At our location, the primary staff member is predictably in contact with his or her resident.
At our location, the primary staff member acts in the resident's best interest.
At our location, there is a strong mutual bond between the primary staff member and resident.
At our location, staff members appreciate all residents.
At our location, staff members and residents like to communicate with each other.
At our location, staff members and residents like to do things together.
At our location, staff members feel comfortable with residents.
At our location, staff members work well with residents.
At our location, in making decisions or appointments, staff members also take into account the resident's wishes.
At our location, staff members take the time to do things with residents.
At our location, staff members listen to what the resident has to say or shows through behaviour.
At our location, staff members first consider the needs of the resident before they act.
At our location, staff members constantly consider what they're going to do with a resident.
At our location, staff members constantly consider how they will do things with a resident.
At our location, staff members constantly consider why they will do given things with the resident.
At our location, relatives have contact with resident family member by phone, visits, etc.
At our location, relatives call staff members to discuss how resident family member is doing.
At our location, relatives eat a hot meal together with resident family member.
At our location, relatives are informed about changes in resident family member's care plan.
At our location, relatives have faith in the staff members.
At our location, staff members are aware of the dependency of relatives on them.
At our location, we work in a repressive/overcontrolling way.
At our location, cooperation between staff members is hampered by the fact that staff members disagree on how to best assist residents.
At our location, the work is negatively influenced by the fact that, in addition to professional contact, staff members also have regular personal contact with each other.
At our location, there is conflict between (groups of) staff members.

Ecological system aspect	Source
Support of colleagues	Positive team functioning LGWCI scale.
Providing room for mistakes	Non-punitive response to mistakes scale of the NHSPSC (Castle *et al.* 2011), a validated questionnaire; scale measures nursing home staff's perceptions of the workplace atmosphere with regard to mistakes.
Staff's sense of safety	Organisational communication scale of the PSC instrument (Bronckhorst, 2018), based on five domains of psychosocial safety climate (management priority given to psychological health and safety, management, organisational communication, organizational participation and involvement in relation to psychological health and safety, group norms).
Implementation of working methods	Efficiency scale of the QWC instrument (Arnetz 1997; Arnetz *et al.* 2011), a validated questionnaire; scale measures employees' perceptions of how well work processes function at their workplaces.
Performance monitoring	Goals QWC scale.
Exosystem: organisational environment	
Staff turnover	No scale; based on previous qualitative studies.
Understaffing	Scale based on previous qualitative studies.
Allowing staff to explore	Competence development QWC scale.
Finding a good match	Scale based on previous qualitative studies.
Practice leadership – manager	Items from the leadership LGWCI scale, which recognizes three types of leadership (inspiring, passive and controlling).

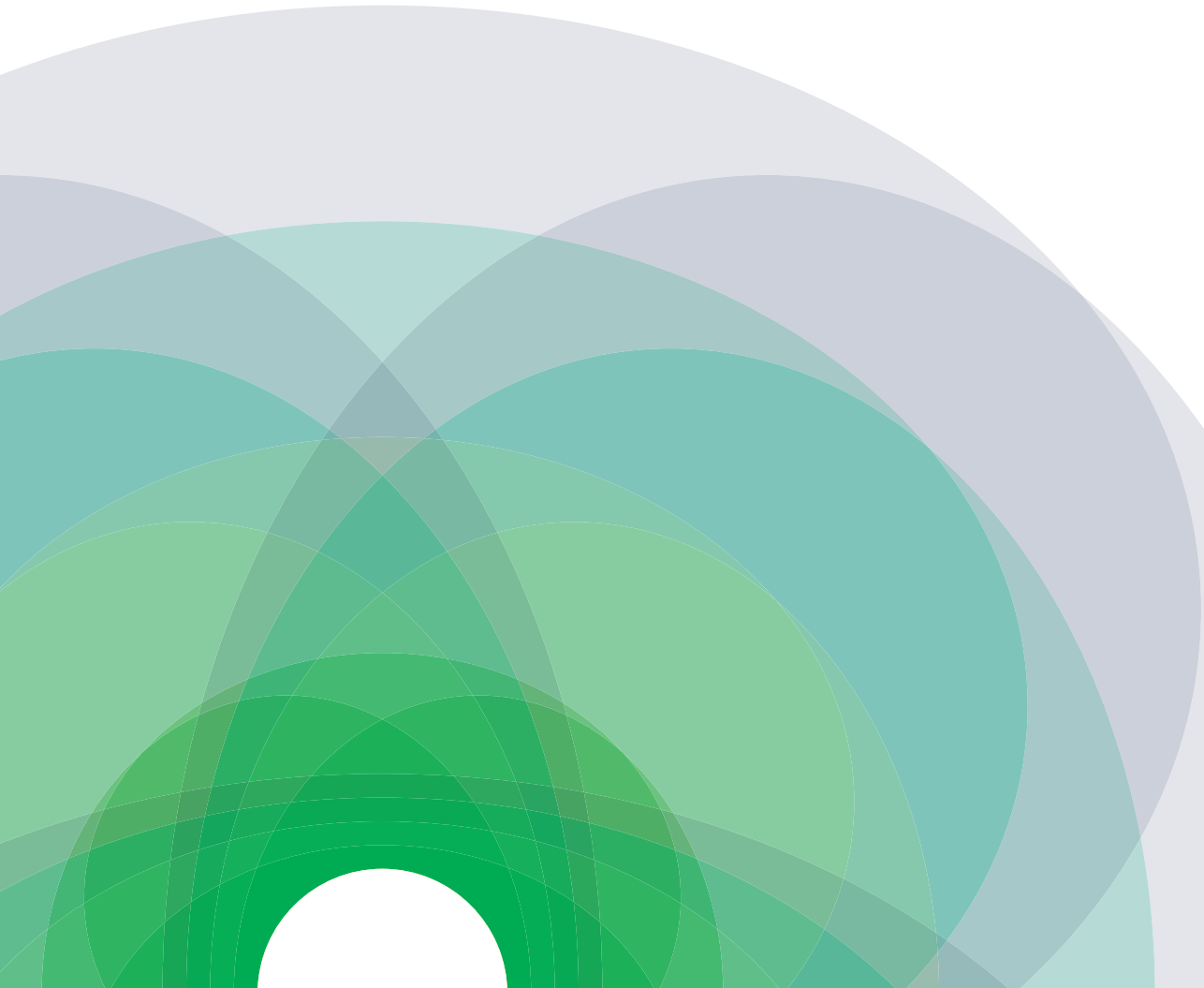
Items
At our location, staff members can handle unexpected situations well.
At our location, staff members feel safe in each other's company.
At our location, staff members share information with colleagues.
At our location, the decisions of colleagues are supported and well executed.
At our location, staff members trust each other.
At our location, staff members are treated fairly when they make mistakes.
At our location, staff members feel safe when reporting mistakes.
At our location, staff members indicate when they see something that could potentially harm/disadvantage a resident.
At our location, we discuss how we can prevent incidents in the future.
At our location, we discuss working methods to ensure that residents are safe.
At our location, we regularly discuss the prevention of incidents.
At our location, we pay attention to the sense of safety of colleagues.
At our location, information about safety at work is always brought to the attention of employees.
At our location, comments and ideas about improving the sense of safety of staff members are listened to.
At our location, we plan our work.
At our location, everyone works toward a common goal.
At our location, the decision process works well.
At our location, resources are optimally used.
At our location, staff members are aware of the (treatment/guidance) methodology/methodologies used.
At our location, staff members put (treatment/guidance) method(s) into practice.
At our location, goals are well defined.
At our location, goals are realistic.
At our location, it is possible for me to influence set goals.
At our location, goals are evaluated.
At our location, there is a large amount of staff turnover.
At our location, there is a shortage of staff.
At our location, there is room for staff members to develop themselves professionally.
At our location, the different competencies of staff members are used in the work we do.
At our location, staff members feel that they can develop in their work.
At our location, the manager offers staff members the opportunity to develop their competencies.
When hiring new staff members, we look at the match with the residents.
When hiring new staff members, we look at the match with other staff members on the team.
When hiring new staff members, we look at the match with the psychologist/manager supporting the location.
The manager at our location doesn't come into action until things go wrong.
The manager at our location avoids getting involved in any important arrangements.
The manager at our location avoids making decisions.
The manager at our location notices when goals are not being achieved.
The manager at our location keeps track of which performance metric in the team could be improved.
The manager at our location shows how you can view problems from different perspectives.
The manager at our location gives advice when needed.
The manager at our location speaks optimistically about the future.
The manager at our location listens to things that are important to the team.
The manager at our location encourages staff members to substantiate their own opinions with valid arguments.
The manager at our location makes staff members aware of important common values and ideals.

Ecological system aspect	Source
Psychologist's coaching of staff	Leadership LGWCI scale items.
Team context	CSAQ (Rose *et al.* 2006), which measures care staff attitudes toward the professionals who work with them.
Authentic leadership	Scale based on previous qualitative studies.
Mission statement	Mission-related items from the shared vision and commitment LGWCI scale.
Vision guiding practice	Vision-related items from the shared vision and commitment LGWCI scale.
Grouping	Scale based on previous qualitative studies.
Staff perceptions and attitudes toward residents' abilities and behaviour	Task significance items from the work motivation LGWCI scale.
Control versus trust – participation	Participation QWC scale.
Control versus trust – proactive behaviour	Proactive behaviour obligations fulfilment LGWCI scale.
Personnel policies in daily work	Performance feedback and leadership QWC scales.
Resident-friendly physical environment	Scale based on previous qualitative studies.

Items
The psychologist at our location doesn't come into action until things go wrong.
The psychologist at our location avoids getting involved in any important arrangements.
The psychologist at our location avoids making decisions.
The psychologist at our location notices when goals are not being achieved.
The psychologist at our location keeps track of which performance metric in the team could be improved.
The psychologist at our location shows how you can view problems from different perspectives.
The psychologist at our location gives advice when needed.
The psychologist at our location speaks optimistically about the future.
The psychologist at our location listens to things that are important to the team.
The psychologist at our location encourages staff members to substantiate their own opinions with valid arguments.
The psychologist at our location makes staff members aware of important common values and ideals.
At our location, experts (doctors, occupational therapists, psychiatrists, etc.) give practical advice to staff members.
At our location, other experts (doctors, occupational therapists, psychiatrists, etc.) can be contacted.
At our location, there is no us-against-them situation between the staff team and the other experts.
At our location, the psychologist, manager or other experts will immediately investigate an incident reported by staff members.
The Director/Board of Directors considers it important to provide high-quality support to people with intellectual disabilities and severe challenging behaviour.
The Director/Board of Directors is aware of important values in the mental healthcare and disability sector.
The Director/Board of Directors communicates and does what they say they are going to do.
A shared sense of cooperation on an important assignment/mission is fostered by the manager of the location.
A shared sense of cooperation on an important assignment/mission is fostered by the psychologist of the location.
A shared sense of cooperation on an important assignment/mission is fostered by the regional/cluster manager.
Everything we do within the organisation is in line with the organisation's vision.
The interests of the residents are always paramount.
There is room to translate the organisational vision into the daily work at my location.
My colleagues and I share our vision on resident care within the organisation.
Residents with challenging behaviours are placed in the same group homes as much as possible.
I do this work for the residents.
I make sure that the residents live comfortably within our location.
I contribute to the development of residents.
I believe that every resident can learn something.
I have the freedom to decide which tasks to perform in my work.
I am satisfied with the extent to which I have an influence on my work.
I can influence decisions about my work.
I consider how I can do my job better.
I consider how I can improve things for a resident.
I look for ways to improve the work we do.
I often think about how I can improve the future for a resident.
It is clear to me what is expected of me in my work.
I am told (by my supervisor) when I am doing a good job.
My supervisor communicates clearly.
My supervisor does what he/she says he/she is going to do.
My supervisor is willing to adapt organisational constraints and work routines to improve support to residents.
The building in which the residents live/work is resident friendly.
The interior of the location is resident friendly.
The environment/neighbourhood where the residents live/work is resident friendly.

Ecological system aspect	Source
Need for extra financial means	Scale based on previous qualitative studies.
Macrosystem: society	
Disability policies	No scale; based on previous qualitative studies.
Deinstitution-alisation	Scale based on previous qualitative studies.
Media attention	Scale based on previous qualitative studies.
Chronosystem: changes	
Service development based on changing views	Scale based on previous qualitative studies.

Items
Is extra funding needed (on top of regular financing) in the provision of support to residents with challenging behaviours for materials replacement?
Is extra funding needed (on top of regular financing) in the provision of support to residents with challenging behaviours for extra staff members?
Is extra funding needed (on top of regular financing) in the provision of support to residents with challenging behaviours for more contact with social networks for the resident?
Is extra funding needed (on top of regular financing) in the provision of support to residents with challenging behaviours for expertise enhancement of the multidisciplinary team?
Is extra funding needed (on top of regular financing) in the provision of support to residents with challenging behaviours for housing?
Is extra funding needed (on top of regular financing) in the provision of support to residents with challenging behaviours for the safety of employees?
I am familiar with the national mental healthcare policy for people with intellectual disabilities.
I can apply governmental policies in daily practice.
Efficiency of work is an important pillar of national policy.
Quality of work is an important pillar of national policy.
My organisation is actively engaged in reverse integration and/or integration into the society or the neighbourhood.
Media coverage of residents with challenging behaviours is negative.
In recent years, there have been several changes in relation to people with intellectual disabilities and challenging behaviours.
My work was influenced by the change in vision on people with intellectual disabilities and challenging behaviours from protection to citizenship.
My work was influenced by the change in the type of support from takeover to activation.
My work was influenced by the change in the work structure according to a care planning system and quality frameworks.
My work was influenced by the change in the living environments of residents (renovation/new construction).
My work was influenced by the change toward the ever-increasing involvement and active contribution of relatives in supporting residents.
My work was influenced by the change in residents' integration into society.
My work was influenced by the change in future prospects for residents (living longer, more active contributions to activities and work).



Chapter 6

A multiple case study investigating changes in organisations serving residents with intellectual disabilities and challenging behaviours.

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ABSTRACT

Background

We examined changes made in disability service organisations supporting residents with intellectual disabilities and challenging behaviours, because these changes may influence residents' support and subsequently their challenging behaviours.

Method

In this multiple case study, we collected and qualitatively analysed data (organisational documents, meetings records, and focus group reports) on organisational changes made in two specialised Dutch disability service organisations, using ecological theory as a sensitising framework and the constant comparative method.

Results

Themes describing organisational changes in this context were: a messy start to the transition; staff, professionals, and managers remain at a distance; staff members' ability to change; clear boundaries between formal and informal caregivers; and staff's feelings of being unheard.

Conclusions

Organisational changes can enhance, but also limit, the quality of residential support services provided to people with intellectual disabilities and challenging behaviours. The change process and impact of organisational changes on residents must be examined closely.

6.1. INTRODUCTION

Residential service organisations for people with intellectual disabilities and challenging behaviours are dynamic, and often change their organisational models (Bigby & Beadle-Brown, 2018; Hulgin, 2004; Tossebro et al., 2012). Organisational changes are associated with various positive resident outcomes, such as shifts to person-centred support services that can reduce challenging behaviour incidents (Walker, 2012). Through staff members' attitudes, a coherent and supportive organisational culture helps to enhance residents' quality of life and decrease their challenging behaviours (Bigby & Beadle-Brown, 2018; Bigby, Knox, Beadle-Brown, & Clement, 2015; Hastings et al., 2013). Changes in service organisations that aim to improve resident outcomes are vital for people with intellectual disabilities and challenging behaviours. These residents often rely on long-term professional support, but risk receiving lower quality support services than residents without challenging behaviours (Beadle-Brown et al., 2016; Hamlin & Oakes, 2008; Hastings et al., 2013; Hensel, Lunsky, & Dewa, 2014 Hulgin, 2004; White, Holland, Marsland, & Oakes, 2003).

Changes in residential disability service organisations for people with intellectual disabilities and challenging behaviours include various aspects which influence each other (Walker, 2012). Ecological theory provides a sensitising framework to aid understanding of these changes. According to this theory, each residents' environment (ontosystem) consists of different ecological systems: the microsystem (e.g. resident–staff interactions), mesosystem (e.g. staff–family interactions), exosystem (e.g. influence of higher management on daily staff practices), and macrosystem (e.g. national policies and budgets; Bronfenbrenner, 1979, 1994; Tudge, Mokrova, Hatfield, & Karnik, 2009). Changes in the resident and the people, objects, or symbols in his or her environment comprise the chronosystem (Bronfenbrenner, 1979, 1994; Tudge et al., 2009). Chronosystem aspects include major life transitions (ontosystem), changes in treatment methods (micro- and mesosystems), organisational mergers (exosystem), and changes in national budgets (macrosystem). Ecological theory also states that residents and their environment interact continuously and reciprocally (Bronfenbrenner, 1979, 1994; Tudge et al., 2009). For example, organisational aspects (e.g. vision and leadership) may impact support service aspects (e.g. team climate and staff working methods), in turn affecting resident–staff interactions via staff members' beliefs about residents' behaviours (Deveau & McGill, 2019; Olivier-Pijpers, Cramm, Buntinx, & Nieboer, 2018; Olivier-Pijpers, Cramm, & Nieboer, 2019). However, few studies examine residential service organisational changes from an ecological perspective (Bigby & Beadle-Brown, 2018; Olivier-Pijpers et al., 2018).

The process of changing the organisational environment to yield positive resident outcomes and improve management of challenging behaviours is complex and often long (Hulgin, 2004; Walker, 2012). Supplementary organisational changes can be implemented to improve support services, such as closing group homes and transferring residents to smaller community settings. This is typically performed over a number of years and impacts residents' daily lives, which in

turn may affect their behaviour. However, resident relocation is insufficient for preventing challenging behaviour. Instead, supplementary changes, such as those in the organisation's vision with respect to resident participation (e.g. increasing control for residents and representatives in support services), are required to further manage challenging behaviours (Hamlin & Oakes, 2008; Walker, 2012). The process of supplementary organisational change is complex, because each change takes place over time and is multifaceted, influenced by an organisations' members and circumstances (Hulgin, 2004). Insight into relevant aspects of organisational change processes may help further improve residential support services.

Some organisational changes negatively affect support quality and residents' challenging behaviours (Bigby & Beadle-Brown, 2018; Olivier-Pijpers et al., 2019; Tossebro et al., 2012). For example, media attention that only focuses on what is considered to be bad practice or restrictions in financial resources can result in organisations exerting more control over their employees, which negatively influences challenging behaviours management (Olivier-Pijpers et al., 2019; Tossebro et al., 2012). A better understanding of organisational change may help to prevent these negative consequences.

Focusing on organisational change in residential services may increase understanding of residents' challenging behaviours and how they can best be managed (Hulgin, 2004; McGill et al., 2018; Walker, 2012). Thus, this study aimed to qualitatively explore changes made in two Dutch residential disability service organisations that provide support to people with intellectual disabilities and challenging behaviours.

6.2. METHOD

Study design and setting

A multiple case study design was used to explore the complex social phenomena of changes made in two service organisations for residents with intellectual disabilities and challenging behaviours (Forrest-Lawrence, 2019; Rodgers et al., 2016; Yin, 2018). We selected this approach to inform other residential disability service organisations about organisational changes made by higher management and how these changes relate to support for people with intellectual disabilities and challenging behaviours (Forrest-Lawrence, 2019; Yin, 2018).

Two large service organisations in different regions in the Netherlands were studied. Each organisation supports around 2,000 residents, with more than 2,000 employees within large scale institutions (around 50 years old) and some small-scale community group homes and cluster housing. This paper describes a longitudinal data series of changes within these organisations. Table 1 shows a timeline of major organisational changes and data collection over three phases.

In both organisations, typically three to five residents per year display severe and persistent challenging behaviours which support staff are unable to prevent or manage. These residents are often restricted in their activities and social interactions, and may experience frequent restraints.

Table 1. Timeline of major organisational changes in both disability service organisations and data collection phases

	2008–2012	2013	2015	2016	2017	2018
Organisation A	Merger of intellectual disability service organisations	From a rather controlling, hierarchical system to a supportive managerial approach	Implementation of self-organising staff teams Increased involvement of residents and representatives in decision-making processes Vision change in order to minimise restraint measures	Insufficient organisational budgets and high absenteeism, limiting support by self-organising staff teams	Implementation of a new electronic health record system with a portal for representatives Interim director appointed Limiting of budgets	New CEO and CFO appointed
Organisation B	Persistent financial problems	Reorganisation with several years of employee relocations	Reorganisations	New CEO appointed New organisational philosophy with a focus on resident-staff member-representative relationships and work quality	From a controlling to a more supportive management style with less-bureaucratic work models New housing for residents Employee training	Implementation of self-organising staff teams
Data collection				**Phase 1** Collecting meeting records Phase-one focus groups and start of phase-two focus groups	**Phase 2** Collecting meeting records Phase-two focus groups	**Phase 3** Collecting organisational documents Phase-three focus groups

Their complex care needs necessitate several staff members and professionals to provide support services, and such efforts have not generally yielded positive resident outcomes. In such cases, the organisations request support from the Centre for Consultation and Expertise (CCE). The researchers were CCE employees and conducted this study during consultations for 13 residents. The residents had mild to severe intellectual disabilities and diagnoses of attachment disorder, depression, panic attacks, and autism spectrum disorder. They displayed severe physical and verbal aggression, persistent self-injurious behaviours, and extreme anxiety or apathy.

Ethics

The Dutch Central Committee on Research Involving Human Subjects confirmed that this research did not fall under the scope of the Medical Research Involving Human Subjects Act. Participants gave their consent prior to the study.

Data collection

Study data comprised information on changes in both service organisations and were collected in three phases, as organisational change processes can take place over several years. In phases 1 and 2, written meeting records were examined and focus groups were held (n = 6 and 7, respectively). In phase 3, eight organisational documents were examined and four focus groups were held. Experts in focus groups and change management supervised the creation of meeting records and focus-group action plans (Appendix).

Meeting records

Meeting records were reports on multidisciplinary team meetings and meetings with resident representatives, staff, and professionals held as part of CCE consultations. A standard method was used to create these records, and Bronfenbrenner's ecological system levels were employed as sensitising concepts. The staff member or psychologist on the multidisciplinary team the longest involved was asked to create each record, providing information on professionals' daily practices during organisational changes. Records were studied and discussed with other staff, professionals, and managers in focus groups during phases 1 and 2.

Organisational documents

Organisational documents provided insight into organisational changes from higher management's perspective. All annual organisational reports from 2016–2019 and two quality reports by higher management from this period were collected.

Focus group reports

Focus groups (2–3 hours each) were held between 2016 and 2019 to provide insight into changes made in the organisations and support services, using Bronfenbrenner's ecological system levels as sensitising concepts in the action plans. Groups were led by two trained and experienced CCE

members and attended by the first author. The moderators and researchers (authors of this study) had no direct relationships with the organisations. Each focus group included at least one staff member, psychologist, manager, and CCE coordinator or expert, to gain multiple perspectives on organisational changes. The moderators ensured that all participants had equal opportunities to express their views. The first author audio recorded the sessions, with all participants' permission, transcribed the recordings, and checked the transcript accuracy with all participants (Farnsworth & Boon, 2010; Freeman, 2006; Onwuegbuzi, Dickinson, Leech, & Zoran, 2009). Focus group data were collected from organisational employees and CCE members who worked with residents with severe and frequent challenging behaviours (see Table 2).

Table 2. Characteristics of focus group participants

Number of participants per focus group	5–10
Sex	18% male 85% female
Employment duration	A few months to > 20 years
Professions	23 direct staff members 13 psychologists 2 physicians 13 managers 11 CCE experts 9 CCE case coordinators
Education	51%, four years of secondary vocational education 49%, university degree in the social sciences All had extra training in managing challenging behaviour.

Data analysis

The first and third authors coded the data by reading the records, reports and documents several times and applying open codes to each sentence or paragraph. Ecological system levels were used to avoid bias related to preconceptions about organisational changes, as these levels provide a sense of how to arrange data without prescriptive instructions. The constant comparative method was used to search for and analyse themes and their boundaries and relationships in the data, with the authors conferring with each other during every step in the process to ensure agreement (Bowen, 2006; Onwuegbuzie et al., 2009). To enhance the external validity, data were analysed using Atlas.ti software (Version 7; Scientific Software Development, Berlin, Germany). This allowed for enhanced transparency in theme construction until theoretical saturation occurred (Boeije, 2002; Bowen, 2006; Dunne, 2011; Onwuegbuzie et al., 2009). The quotations presented with the themes were translated from Dutch to English by a professional translator and checked by the first author after translation.

6.3. RESULTS

Data from both organisations provided similar themes regarding organisational changes for residents with intellectual disabilities and challenging behaviours. The quotations below are anonymised and from members of both organisations.

A messy start to the transition

Annual reports from higher management and focus group reports (by organisation and CCE members) indicated that organisational changes initially felt 'messy' to staff. Over a few weeks during a transition to self-organising staff teams, staff members became solely responsible for drafting residents' new personal care plans and contacting other professionals, instead of receiving frequent support from psychologists or managers on residents' challenging behaviours. After a few weeks, psychologists provided new treatment plans to supplement the care plans, providing better guidelines for daily management of challenging behaviours. In a focus group, a psychologist explained this messy start:

> *Staff became responsible for contacting other professionals. Regularly messy. Where do you have to go for that? Do I have to decide on my own? How do you find ...? How do you reach this or that person? Also, the amount of responsibility you have depends on the individual care manager. A lot of support and facilitation [from the manager] only at the staff's request. Personal care plans are drawn up without other professionals. In addition to transitioning from the old care plan to the new, now a treatment plan must be drawn up [by the psychologist]. [The change] is implemented at high speed, and there are no clear guidelines.*

In the first few weeks during periods in which entirely new staff teams were constructed to provide more efficient support, these teams had insufficient information to handle residents' behaviours, and incidents involving challenging behaviours increased. Staff felt judged by managers and psychologists for these increased incidents, as explained in a focus group by a group home staff member:

> *I wanted to prevent the daycare team from being judged because things went wrong during daytime activities, as if they would have caused this mess. It was a whole new staff; there had been a reorganisation. They had little knowledge and expertise about this resident; it was not a matter of not working, it was ambiguous work without consistent supervision. There were many escalations; the team couldn't do anything about them. They weren't familiar with [the residents] and were thrown into the deep end.*

Staff, professionals, and managers remain at a distance

Another theme identified in the meetings and focus group reports by all organisation and CCE members was the increased distance between staff, other professionals, and managers during employee and resident relocations. Staff, other professionals, and managers argued that relocations improved residents' quality of life by offering a more suitable environment and more efficient daily support. However, they stated that the long relocation period for managers and psychologists, along with several changes in managerial functions, affected resident–staff bonding. Without proper working relationships, the staff found it difficult to focus on residents' needs. In a focus group, a staff member, manager, and psychologist recalled the timeline of this period, starting in 2013 with relocations, followed with managerial changes (which expanded managers' control) in 2015. In this context, increasing distrust in working relationships among staff and other organisation members and less resident–staff bonding affected management of challenging behaviours:

> *Staff member: There were no target group managers anymore, and many relocations of managers and psychologists. That caused a somewhat unsafe feeling in daily work practices and in group homes. Residents could not bond with professionals or staff, and staff found it difficult to trust anyone in the organisation.*
> *Manager: Were there no target group managers anymore? Three years ago, they were still there; didn't they just stop two years ago?*
> *Staff member: They were still there, but the change had been announced. And two years ago, that change was indeed implemented. Several changes—from team leader, to target group manager, to care manager. The atmosphere in the group homes around those changes was uncertainty. In 2015, a new organisational philosophy was clearly being developed, and was actually initiated in 2016.*
> *Psychologist: Relocations, position changes among managers, and also relocations among psychologists. It started in 2013 and lasted a few years. Co-operation among various disciplines was not optimal, partly due to all the relocations. There was uncertainty; people remained at a distance.*

After implementing self-organising teams, staff and other professionals had less informal and formal contact. A coach and staff member stated in a focus group that coaches remained hesitant to assist staff, because they must wait for staff members to signal for help, according to the organisational vision. Staff members were hesitant to ask for help, as they were supposed to be self-organising teams, resulting in heavy workloads during periods of increased incidents with challenging behaviours:

> *Coach: We, too, are still learning. Should we be close to the staff, or rather aim for a staff team who feels 'we have the freedom; don't take everything away from us'?*

Staff member: We have a very independent team, which went well for a while until major issues arose. A lot of work ends up on few shoulders, and it is no longer bearable. Asking a question [to a coach for help] is still difficult.

Staff members' ability to change

According to focus group participants and organisational reports, not all staff members were able (or willing) to change. Individual staff members' attitudes and routines seemed to limit higher management's ability to implement a new vision for managing challenging behaviours via minimising restraint measures. A 2017 quality report indicated that staff needed more awareness and knowledge to positively change how they managed challenging behaviours. Proper staff behaviours were stimulated by discussing organisational views on support and upcoming legislative changes:

In 2017, many actions were taken to reduce restraint measures. As a result, the number of restraint measures has fallen sharply. However, there is still room for improvement at the individual level. This mainly concerns raising awareness (what are restraint measures) and consciously applying them (why is it inappropriate). Too often, we still work on the basis of routine: 'that's how we always do it'. We used the developments surrounding the Care and Compulsion Act (WZD) as an extra reason to bring the restraint measures and extension of freedom back to [staff's] attention and to share knowledge about 'what is and is not allowed'. Additionally, teams are encouraged to reason from a resident's perspective.

With this effort to minimise restraint measures and the lack of staff competence in supporting residents with moderate intellectual disabilities, more severe incidents with challenging behaviours occurred. Expensive temporary workers were then hired, as stated in a 2017 quality report:

Partly due to the reduction of restraint measures, the number of aggression incidents in several groups for residents with moderate intellectual disabilities increased. This group was relatively new to our organisation, and staff were not sufficiently equipped to support them. As an alternative, we opted to use temporary employment agencies that specialised in supporting such groups. In the second half of the year, there was more focus on reducing the use of temporary workers.

After receiving training in positive attitudes and use of fewer restraint measures, some staff members showed increased abilities to redirect challenging behaviours. One staff member explained in a focus group how her attitude change after receiving training in 2018 affected her support of a resident; the resident was no longer restrained by staff when he displayed challenging behaviours:

There are still a few times when the resident walks away, but he often returns on time. We're not angry when he comes back, but we're glad he is honest. We talk openly about it. Initially,

he was afraid we would get angry and restrain him, which made him angry again. He now knows that we'll welcome him positively, and we will keep supporting him. Tomorrow, we'll have new opportunities. He wants to talk about it the next day. The relationship is mutual trust and welcoming him anew.

Clear boundaries between formal and informal caregivers

According to focus group participants and organisational reports, the roles of residents' representatives and professionals were initially blurred during organisational changes meant to allow representatives more say regarding support services. These changes eventually led to acknowledging representatives' unique input on specific topics regarding complex support services provided to their family members. A staff member explained in a focus group how staff limited the topics in which a resident's mother had a say (e.g. regarding activities and goals), resulting in clearer boundaries between roles of the mother and professionals:

What belongs to the mother and what belongs to the professionals? That's been separated. Mother and aunt, as well as curator and psychologist, were all at the table the moment the mother tried to discuss topics for the professionals. The mother must discuss her topics with the curator. The mother used to be intertwined with the professional system.

A staff member in another focus group explained how a new electronic health record system helped create a transparent working relationship between staff and a resident's ex-husband. Inquiring with the ex-husband helped the staff understand the resident's personal history, and reading daily reports in the health record allowed the ex-husband to stay informed about the support provided to the resident without arguing with the staff:

Relationships with the family are different, based on the new information on causes for resident's challenging behaviour [with help from the ex-husband]. The family can now let go a bit more, being able to read daily reports [by staff] from home. The [electronic health record] pilot was January 2017. Since May 2017, we've started with her and her family. The staff is no longer questioned on what her day was like, because her ex-husband can already read in her record, and he thinks about when it would be best for him to come to the group home.

Staff's feelings of being unheard

Implementing changes over several years (e.g. budget cuts, self-organising staff teams) led to changes within staff teams and how they functioned, as indicated in the focus groups and meeting records. Some focus group participants shared frustrations about higher management not listening to them regarding how organisational changes impacted their daily practices. Staff then focused less on interacting with residents and managing challenging behaviours, and more on

how little influence they had within the organisation. A CCE expert and a middle manager explained this in a focus group:

> *Expert: So, we made an inventory [with the multidisciplinary team]. And they said, 'That's really nice, but that's been done a lot and nothing ever happens. So...' And there's the bit about the CCE's influence. They said: 'Those reports have been made often about who this resident is and what she needs. And the conditions [needed for her support] have repeatedly been identified, but nothing is happening and staff has been waiting for years.' So, these comments went around several times from different [staff members]. We let them display their frustration, and gave them our attention.*
> *Manager: All this is 'office politics': energy that you can no longer use for 'How do you deal with your residents and how do you organise support'? I've said on a number of occasions I think that's so unfortunate, and I think you'll end up doing yourself and the residents a disservice.*

6.4. DISCUSSION

In this study, multiple perspectives provided insight into organisational changes at the exosystem level (e.g. self-organising staff teams, personnel relocations, and new visions), support service changes at the mesosystem level (e.g. staff's feelings and working relationships with representatives), and changes in staff–resident interactions at the microsystem level (e.g. bonding and incidents) in service organisations for residents with intellectual disabilities and challenging behaviours (ontosystem). This study is among the first to explore changes in residential service organisations for people with intellectual disabilities and challenging behaviours from an ecological system perspective.

First, during initial exosystem-level transitions, staff members lacked support from psychologists and managers and information on residents' behaviours at the meso- and microsystem levels. This created a 'messy' situation that negatively impacted management of challenging behaviour. Research indicates support from managers and psychologists through practice leadership, with frequent formal and informal staff contact, is vital for improving management of challenging behaviours and building a coherent team culture, leading to staff receiving and sharing guidance on how to provide support in line with residents' behaviours (Deveau & McGill, 2019; Deveau, Gore, & McGill, 2020; Olivier-Pijpers, et al., 2018; Olivier-Pijpers, Cramm, Nieboer, 2019; Tournier, Hendriks, Jahoda, Hastings, & Embregts, 2020).

Second, during years of employee and resident relocations, or transitioning to self-organising staff teams, organisation members remained at a distance from each other at the mesosystem level, affecting resident–staff bonding at the onto- and microsystem levels, which in turn limited management of challenging behaviour. To bond with residents and act positively towards them during incidents with challenging behaviours, staff members need consistent, positive working

relationships with managers and psychologists, based on clear organisational values and team culture (Olivier-Pijpers, Cramm, & Nieboer, 2019; Ravoux, Baker, & Brown, 2012; Tournier et al., 2020).

Third, while aiming to minimise restraint measures, incidents initially increased, and not all staff members were able or willing to change at the microsystem level. Discussions about impending legislation at the macrosystem level and providing staff training improved some staff members' attitudes and abilities. These findings are partly in line with Schippers (2019), who concluded that organisational changes meant to minimise restraint measure use in behavioural management must be accompanied by interventions at the support service (specialised multidisciplinary team formation and training) and resident (changes in care plans) levels. Bridging the gap between a new vision and daily practices is difficult, and staff members' skills and motivation to change may increase through situational leadership to encourage staff, reviews of interventions to enforce new actions, and information on new actions to monitor changes (Deveau & Leitch, 2020; Ravoux, et al., 2012; Tournier et al., 2020). Furthermore, a stable and well-informed multidisciplinary team is the base for continual staff education, and required for successful long-term changes made to prevent challenging behaviours (Walker, 2012).

Fourth, in the context of a new exosystem-level vision for improving interactions between representatives and staff and implementing electronic health record systems, representatives' input in support services for their family members became more valued by staff, and clarity in boundaries between staff and representatives improved at the mesosystem level. Transparency should be emphasized in these working relationships, as it is foundational for residential support services and positive resident outcomes (Doody, 2011; Griffith, Hutchinson, & Hastings, 2013; Olivier-Pijpers, Cramm, & Nieboer, 2020).

Fifth, managers and psychologists neglecting staff while implementing exosystem-level organisational changes over several years ultimately resulted in staff and other professionals feeling ignored at the mesosystem level, which could increase challenging behaviours at the microsystem level. White and colleagues (2003) stated that such feelings can restrict the influence of other professionals, possibly leading to abusive staff practices when managing challenging behaviours. Our findings are partly in line with Philips and Rose (2010), who concluded that factors such as insufficient staff resources and staff feeling unheard can impair support services, thus manifesting as less-frequent and less-appropriate staff–resident interactions and an overworked staff unable to proactively manage challenging behaviours. Combined with poor administrative systems and/or insufficient information about organisational changes, which reinforces staff feelings of helplessness, this can lead to the breakdown of support services and poor resident outcomes (Philips & Rose, 2010). Thus, organisational changes are able to increase the quality of support services for residents with intellectual disabilities and challenging behaviours, but can decrease the quality as well, thereby affecting resident outcomes.

Organisational changes can be limited when staff perceives a gap between such changes with their daily support practices due to distance from other organisation members, feeling unheard,

or receiving insufficient guidance. Organisational changes trigger negative organisation members' responses and may affect their daily practices (Greenhalgh, Robert, MacFarlane, Bate, & Kyriakidou, 2004). As Rogers (1995) stated, these responses consider whether changes benefit those involved, are compatible with staff norms and values, are observable and not too complex, and allow for experimentation (Nieboer, Pijpers, & Strating, 2011). Furthermore, longstanding organisational changes in daily practices are influenced by informal and formal staff social networks in the organisation (Greenhalgh et al., 2004). Thus, desired changes and outcomes for staff and residents should be examined before any changes are made, as organisational changes should improve outcomes for and decrease challenging behaviours in residents.

Many organisational changes, including those examined in this study, are executed over multiple years and hindered by the complex transformational process, which is initially messy and then consists of assimilation and routinisation (cf. Finlay, 2000; Greenhalgh et al., 2004). This process is also difficult because supporting staff and managing challenging behaviours cannot be encompassed by universal procedures or rules, and organisational visions and values must be continually translated into daily staff practices to form transparent working relationships among organisation members and representatives (Bigby, Knox, Beadle-Brown, & Clement, 2015; Finlay, 2000; Tournier et al., 2020). Walker (2012) stated that organisational changes entail comprehensive cultural changes across an organisation, including strategies generating commitment to organisational values, authentic actions according to the organisational vision, shifts in power and control, and cultivation of staff engagement (Finlay, 2000; Walker, 2012). Organisations have the responsibility to improve resident outcomes by identifying intervening environmental factors and aligning support strategies with these factors, disability policy goals, and residents' rights, human functioning, and quality of life (Schalock, Luckasson, & Shogren, 2020; Shogren, Luckasson, Schalock, 2018; 2020). Accordingly, research should not only focus on changes in residents but also the continuous, complex process of change in service organisations.

This study has value for researchers and practitioners, as the ecological perspective provides insight into recent studies on implementing and maintaining active support in various services, which have concluded that hands-on training and managerial leadership seem to be crucial organisational aspects (Beadle-Brown, Bigby, & Bould, 2015; Bigby & Beadle-Brown, 2018; Bigby, Bould, Iacono, Kavanagh, & Beadle-Brown, 2019; Deveau & McGill, 2016a, 2016b, 2019). As Bould, Beadle-Brown, Bigby, and Iacono (2016) stated, implementing a new vision or support service is often supported by training and practice leadership, as well as performed through generally good management and proper working relationships. In practice, organisations' long-term commitment to change, translated into managers' and psychologists' practice leadership, with guidelines and information for staff and a focus on transparency in working relationships, is important for managing challenging behaviours (Deveau & McGill., 2019; Deveau, Gore, & McGill, 2020; Olivier-Pijpers, et al., 2018; Schipper, 2019; Tournier et al., 2020; Walker, 2012). During organisational changes, continuous discussions on aligning staff attitudes with the organisational vision, staff training in positive attitudes and reduced restraint

use, and sufficient information about residents' needs to enhance resident–staff bonding are also necessary (Olivier-Pijpers, Cramm, & Nieboer, 2019; Philips & Rose, 2010; Walker, 2012). Future studies should seek to determine how organisational changes can enhance management of challenging behaviours without a 'messy' transitional process and negative consequences for staff and residents.

Limitations

This study has several limitations. First, it was conducted with only two Dutch disability service organisations, which might limit the findings' generalisability. Analytic generalisation, however, remains possible; other cases can be examined to identify similarities and differences, with reflection on these with respect to organisational changes (Forrest-Lawrence, 2019; Rodgers et al., 2016; Yin, 2018). Residents and their representatives were not invited to the focus groups, as the research topic was 'organisational changes', into which organisation employees are likely to have the most insight. Their perspectives should be considered in future research. Additionally, focus groups have limitations, which we tried to manage by providing clear action plans, using independent and trained group moderators, and working to create a safe and open setting. We also used other data sources (meeting records and organisational documents); however, the large amount of data was difficult to manage, which was complicated by the lack of clear rules on how to extract themes. Finally, we used ecological theory as a sensitising framework, which helped us to unravel aspects of supplementary changes at multiple levels, but can also pose limitations. Models of organisational change (cf. Finlay, 2000) may help all multiple phases in change processes to be examined, and the use of such models may have allowed us to better unravel these phases of organisation change. Further, a multidimensional contextual paradigm, instead of the person–environment paradigm of ecological theory, may provide supplementary insight for multiple levels, factors, and interactions that facilitate or hinder changes in residents' support and lives (Schalock et al., 2020; Shogren et al., 2018, 2020).

6.5. CONCLUSION

Organisational changes can enhance support services and, in turn, positively influence residents' behaviours; however, they can also limit support services. Thus, organisational changes made in the context of providing support services to residents with intellectual disabilities and challenging behaviours should be made with great thoughtfulness and long-term organisational commitment, and prioritize support service quality and improving management of challenging behaviours.

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APPENDIX

1. Standard method for creating meeting records

Detailed written records were created after meetings related to Centre for Consultation and Expertise (CCE) consultation, according to the following instructions:

a. Provide written information on the characteristics (e.g. intellectual disabilities, challenging behaviours) and history of the resident for whom the CCE consultation is being conducted (Bronfenbrenner's chrono-, onto-, micro- and mesosystem levels)
b. Provide written information on staff members' and other care professionals' difficulties in support services, and the reasons for and people involved in the CCE consultation (at the chrono-, meso- and exosystem levels)
c. Recollect and provide information about a meeting during the CCE consultation that exemplifies how care professionals (e.g. staff members, psychologists, physicians), managers, and representatives are working together in providing support services and managing the resident's challenging behaviour (at the meso- and exosystem levels)
d. Record what you saw, heard, and felt during the meeting without interpretation

2. Focus group action plans

Action plan for phase-one and phase-two focus groups

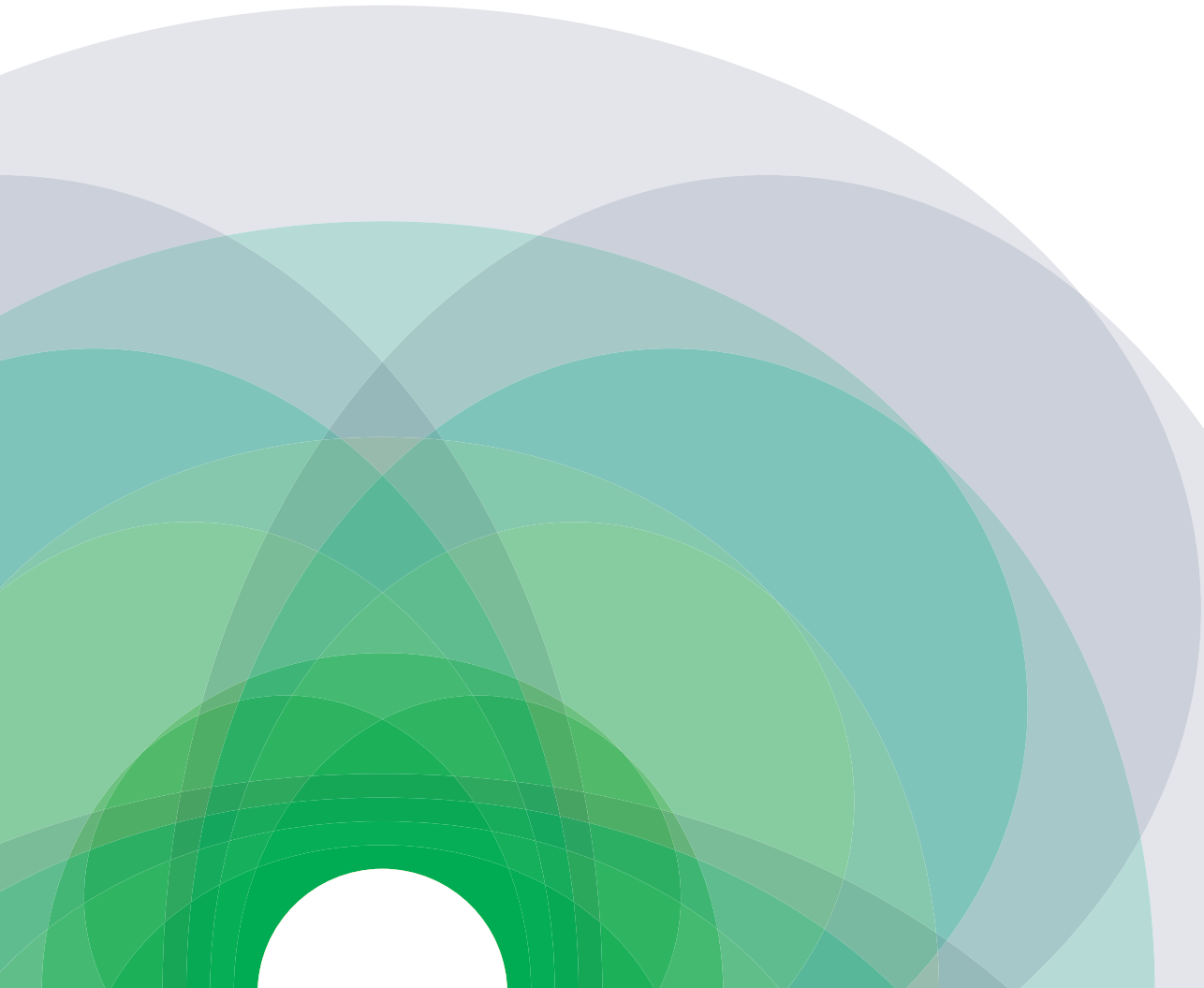
These focus groups were held to discuss organisational changes made during CCE consultations, and were held in data collection phases one and two. They were conducted using the following action plan:

a. Read information provided by staff members and psychologists on the characteristics (e.g. intellectual disabilities, challenging behaviours) of residents for whom CCE consultations had been started during the relevant period, and on staff members' and other care professionals' difficulties with the support services (Bronfenbrenner's onto-, micro- and mesosystems)
b. Discuss detailed written records of meetings held with multidisciplinary teams, representatives, and/or professionals regarding CCE consultations conducted during the relevant period (meso- and exosystems)
c. Discuss contemporaneous organisational aspects and changes in the context of residents (chrono-, meso-, exo- and macrosystems)
d. Discuss possible relationships among these aspects and changes in the context of residents with intellectual disabilities and challenging behaviours and the staff members responsible for them (chrono-, micro-, meso- and exosystems)

Action plan for phase-three focus groups

These focus groups were held to discuss organisational changes made during CCE consultations in data collection phase three. They were conducted using the following action plan:

a. Construct a timeline of participants' involvement with the organisation, their residents, and CCE consultations to determine the period of interest
b. Discuss key moments in that period in which organisational aspects and changes positively affected professionals' work in the context of residents for whom CCE consultations had been conducted (and other residents in the group home or with similar care needs; Bronfenbrenner's chrono-, micro-, meso-, exo- and macrosystems)
c. Extract and discuss key elements of organisational aspects and changes based on these key moments (chrono-, micro-, meso-, exo- and macrosystems)



Chapter 7

General discussion

7.1. INTRODUCTION

The overall aim of this thesis was to explore the relationships between the organisational environment and challenging behaviours in support service organisation residents with intellectual disabilities from an ecological perspective. We expect that insights into these relationships will aid the development of guidelines to improve the provision of support services to residents with intellectual disabilities, and provide suggestions for future research (Bigby & Beadle-Brown, 2018; Bigby, *et al.*, 2009; Carr, 2007; Dilworth *et al.*, 2011; Emerson & Einfeld, 2011; Felce, Lowe, & Jones, 2002). The findings of ecological studies help to shift the focus from the person displaying challenging behaviours to the misfit between that person and his or her environment. Challenging behaviours may be reduced more successfully by interventions targeting the environment, rather than the resident (McGill *et al.*, 2018).The research questions in this study, using ecological theory as sensitising framework, were stated as follows:

1. To what extend do different organisational aspects influence challenging behaviour in residents with intellectual disabilities?
2. Which changes in disability service organisations have been made for residents with intellectual disabilities and challenging behaviours?

In this chapter, the main findings of the studies conducted as part of this thesis research are applied to answer the research questions. The use of Bronfenbrenner's (1979, 1994, 1999, 2005; Bronfenbrenner & Morris, 2006) ecological model as a sensitising framework and a mixed-methods study design is then discussed. Finally, the implications of this study for policy and practice are presented, and recommendations for future research are provided.

7.2. MAIN FINDINGS

7.2.1. The extent to which different organisational aspects influence the challenging behaviour of support facility residents with intellectual disabilities

Four studies guided by ecological theory were conducted to address this research question. They revealed aspects of the organisational environment associated with the challenging behaviours of disability service organisation residents with intellectual disabilities. At all ecological system levels (*onto-*, *micro-*, *meso-*, *exo-*, *macro-* and *chronosystem*) there are aspects associated with challenging behaviours in residents with intellectual disabilities (Chapter 2; Chapter 3; Chapter 4; Chapter 5; Chapter 6), which are presented in Figure 1.

Ontosystem level

At the ontosystem level, relevant aspects were related to residents' abilities and behaviours. Less adaptive and more problematic (e.g. sexual) challenging behaviours in disability service organi-

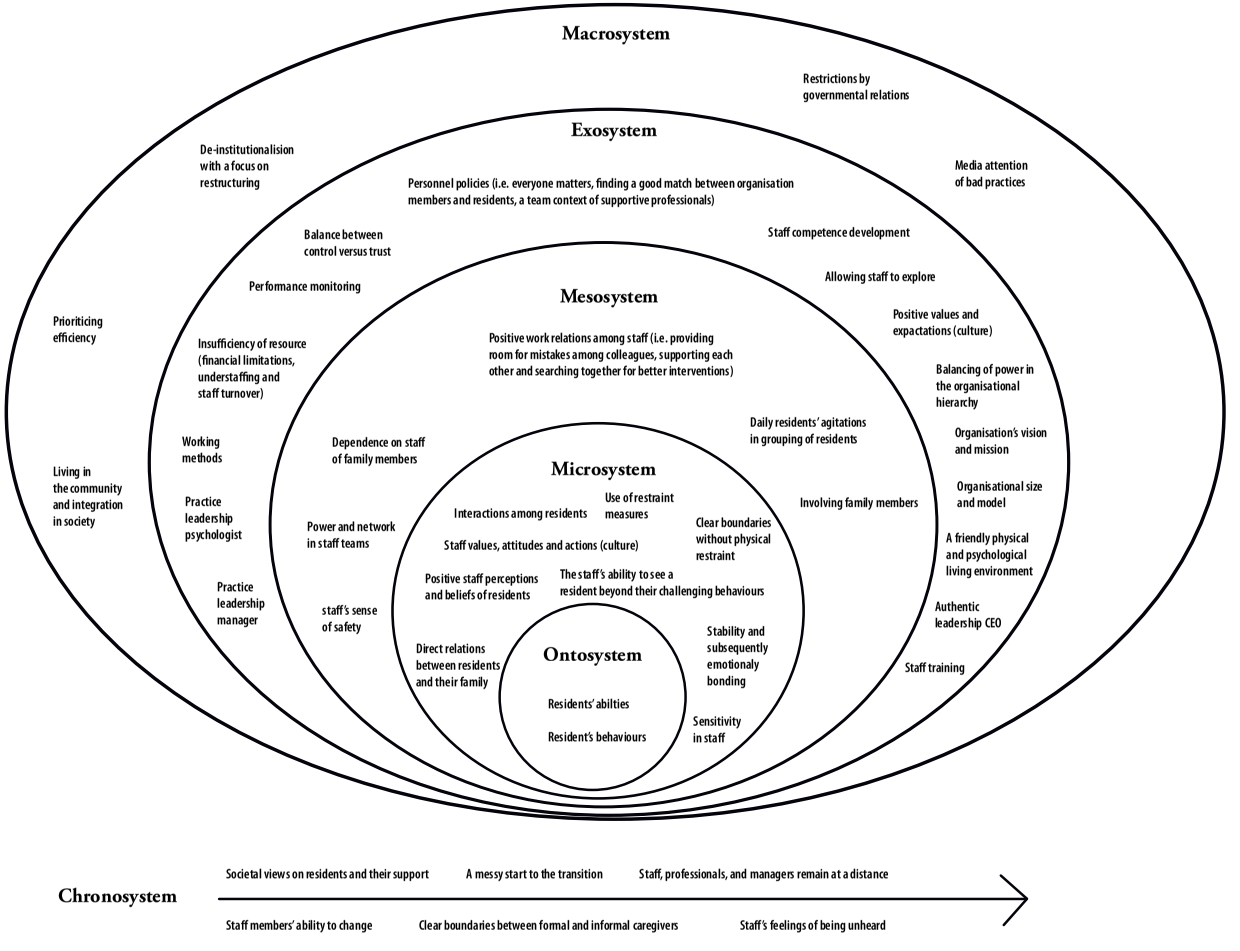


Figure 1. Ecological system aspects affecting residents with intellectual disabilities and challenging behaviour

sation residents have been associated with the reduced quality of staff support (Broadhurst & Mansell, 2007; Mansell *et al.*, 2002; Chapter 2). A greater intensity of support provided and the use of restraint measures to manage challenging behaviours are related to the greater complexity of these behaviours and the reduction of residents' abilities (Chapters 3 and 4). Schippers (2019) reported that staff members who use restraint measures are more likely to apply them to residents with lesser communication and socialisation abilities who display challenging behaviours. Furthermore, residents who display challenging behaviours may have histories of transfer because staff and other professionals were not able to manage these behaviours (Chapters 3 and 4).

Microsystem level

At the microsystem level (the resident-staff member interaction), positive staff perceptions and beliefs about residents' abilities and the staff's ability to see residents beyond their challenging behaviours may reduce the occurrence of challenging behaviour, as positive social interactions help residents to feel valued and acknowledged in their abilities (Bigby, *et al.*, 2015; Bigby, *et al.*, 2012; Gillet & Stenfert-Kroese, 2003; White *et al.*, 2003; Chapters 2–5). Johnson and colleagues (2012) added that positive social interaction should be seen as a meaningful activity or goal in itself, not solely as the basis for an activity with a resident. Studies of positive behaviour support have shown that positive and respectful resident–staff member relationships are possible in a therapeutic environment, and are cultivated by staff members who also aim for the meaningful involvement of residents in their communities (McKenzie *et al.,* 2018).

High sensitivity of staff members to residents' feelings and needs is also linked to the reduction of challenging behaviours (Chapters 4 and 5). Positive staff perceptions of residents and staff sensitivity in their interactions with residents are effective when staff members are highly experienced and qualified (Beadle-Brown *et al.*, 2015; Felce *et al.*, 2002; Chapters 2 and 4). The quality of resident–staff member rapport (i.e. responsivity, turn taking and reciprocity) also has been found to influence challenging behaviours when staff members have training and guidance in other competencies (i.e. knowledge, skills) (McLaughlin & Carr, 2005; White *et al.*, 2003). Managers play an active role in the enhancement of competence development in proper staff work climates, which in turn increases staff performance and job commitment (Arnetz & Blomkvist, 2007; Bigby, Bould, & Beadle-Brown, 2017; Deveau & McGill, 2019; Josefsson *et al.*, 2018; Lindberg & Vingard, 2012). Positive interactions of sensitive staff members with residents are also linked to (combinations of) other ecological aspects, such as staff teams' receipt of coaching and guidance in daily practice not only by supportive managers, but also by psychologists, and the provision of such support in accordance with the working method and staff training, which in turn are in line with the organisational vision and implemented properly with sufficient resources (i.e. personnel, finances; Chapters 2–4). Positive staff values, attitudes and actions are also formed by a clear organisational culture and by the creation of physically and socially appropriate living and working environments in the organisation, which in turn are linked to societal belief systems and national policies (Chapters 2–4).

In addition, positive staff perceptions of residents and staff sensitivity may translate to staff members' ability to provide clear boundaries without physical restraint, which may reduce the occurrence of challenging behaviours (Chapter 4). In contrast to clear boundaries, restraint measures may trigger challenging behaviours because of the restriction on residents' actions and behaviours instead of acting sensitive (Heyveart, Saenen, Maes, & Onghena, 2015; Schippers, 2019; Chapter 4).

Other relevant microsystem-level aspects are the stability of resident−staff member relationships and subsequent emotional bonding, which provide a constructive base for challenging behaviour management and a context for positive regard of residents (Bigby *et al.*, 2015; Chapters 3 and 4). Unfortunately, the formation of lasting resident–staff member relationships is demanding for the staff, as staff members are constantly aware that incidents may happen, and in some cases are anxious in their contacts with residents, which in turn may result in more challenging behaviours of residents (Chapter 3). In addition, stress in interactions among residents may increase challenging behaviours due to residents' difficulty in understanding each other's behaviours (Heyveart *et al.*, 2015; Chapters 2 and 4). Lastly, the staff-facilitated fostering of direct relationships between residents and their family members is linked to the reduction of challenging behaviours in residents, as family members are able to advocate for residents' support needs (Doody, 2011; Chapters 3 and 4).

Mesosystem level

At the mesosystem level (in the staff team, staff and family members interactions), imbalances of power and networking in staff teams, with lesser involvement and support from other organisation members, are linked to the increased occurrence of residents' challenging behaviours because the lack of positive interactions among staff members hinders their ability to interact positively with residents (White *et al.*, 2003; Chapters 2 and 5). Second, the staff's sense of safety in positive working relationships (i.e. making room for mistakes among colleagues, supporting each other and searching together for better interventions) increases staff members' ability to manage residents' challenging behaviours (Chapters 3 and 4). A sense of physical and psychological safety and appropriate boundaries in staff teams are created in the context of managers' and psychologists' guidance and monitoring of staff practices (White *et al.*, 2003; Chapters 2–4).

Third, the staff's management of daily resident agitations in a group home may impose additional stress on the staff team, affecting how staff members act during incidents involving challenging behaviours (Beadle-Brown *et al.*, 2015; White *et al.*, 2003; Chapters 2 and 4). Homogeneous and heterogeneous grouping of residents both may enhance stressful interactions, resulting in more challenging behaviours due to the occurrence of such behaviour among residents or to the staff's difficulty in meeting residents' different care needs (Beadle-Brown *et al.*, 2015; White *et al.*, 2003; Chapters 2 and 4).

Lastly, the involvement of family members in the support service is problematic because of the damage that challenging behaviours have caused to resident–family member relationships

(Chapter 3). Many involved family members struggle with their great dependence on the staff and staff competencies, as they are no longer able to support their family members (Griffith & Hastings, 2014; Griffith, Hutchinson, & Hastings, 2013; Chapter 4). Wodehouse and McGill (2009) stated that family members do not often feel that care professionals consider their views, and that they feel that they are sometimes blamed for residents' challenging behaviours. Supporting family members require support themselves, which can enhance their challenging behaviour management (Wodehouse & McGill, 2009; Chapter 4).

Exosystem level

At the exosystem level (the organisation), the organisational environment may positively (e.g. via performance monitoring) and negatively (e.g. via financial limitations) influence the staff and, in turn, residents' challenging behaviours (Chapter 4). First, finding a balance between other organisation members' control and trust of staff members, and allowing the staff to explore within the provision of daily support to residents, are important considerations for challenging behaviour management, as this type of support does not fit easily into a single protocol or standardised guideline (Carr, 2007; Chapters 2 and 3). Carr (2007) reflected on the importance in challenging behaviour management of focussing not on the elimination of psychopathology, but on the creation of meaningful lives for residents, which requires a supportive environment in which staff members can adjust their provision of support to residents when needed.

Second, the balancing of power in the organisational hierarchy is important for challenging behaviour management because negative interactions between managers and staff members may trigger negative relationships between staff members and residents (White *et al.*, 2003; Chapters 2 and 3). Third, staff competence development and performance monitoring seem to be the responsibilities of managers, and thus depend on managers' ability to display practice leadership (Chapters 2–4). Practice leadership has been the focus of recent research (Beadle-Brown *et al.*, 2014, 20015, 2016; Bigby *et al.*, 2017; Deveau & McGill, 2016a, 2016b, 2019; Deveau, Gore, & McGill, 2020), and has been found to be a key element in support services for residents with intellectual disabilities who display challenging behaviours (Bigby & Beadle-Brown, 2018; Chapter 2). However, a manager's practice leadership is only effective in the presence of good general management (Deveau & McGill, 2019). Nonetheless, managers actively enable and maintain competence development for staff by facilitating positive work climates and the establishment of clear goals and tasks, which increase staff performance and job commitment, in turn benefitting the staff and residents (Arnetz & Blomkvist, 2007; Bigby & Beadle-Brown, 2018; Bigby *et al.*, 2017; Deveau & McGill, 2019; Josefsson *et al.*, 2018; Lindberg & Vingard, 2012). Psychologists' practice leadership, the proper implementation of working methods, and training of staff also enhance staff competence in challenging behaviour management (Chapters 2–4).

Fourth, the insufficiency of resources, and especially the stress placed on support services as a result of financial limitations, understaffing and staff turnover, is associated with an increase in residents' challenging behaviour (Bigby & Beadle-Brown, 2018; Chapters 2, 3 and 5). Stevens

and colleagues (2019) concluded that in the care for people with intellectual disabilities, staff retention depends on staff members' feeling that their input is improving their residents' quality of life, high staff morale and managements' support of staff.

Fifth, the translation of personnel policies into daily practice, including the assurance that every employee and resident matters in the provision of the support service; finding good matches between staff members, psychologists, managers and residents; and the staff's embedding in a team context with supportive professionals, influences residents' challenging behaviour (Chapters 2–4). These aspects of personnel policies are associated with constructive and professional working relationships between organisation members and with residents (Bigby & Beadle-Brown, 2018; Chapters 2 and 3). The quality of support service provision and challenging behaviour management depends on staff members', other care professionals' and managers' willingness to work together as a team, and on the presence of a clear decision−making authority in that team, which requires good communication among and matching of care professionals and managers (Dekker *et al.*, 2015; Scheffelaar *et al.*, 2018).

Sixth, a positive organisational culture (positive values and expectations) combined with the organisational vision and mission, which guide the daily practices of the staff, may further enable challenging behaviour management (Bigby *et al.*, 2012, 2015; Felce *et al.*, 2002; Gillett & Stenfert-Kroese, 2003; White *et al.*, 2003; Chapters 2–4). In turn, authentic leadership by the CEO may enable implementation of the organisation's vision, mission and values in daily staff practices because it is associated with a positive psychological staff climate and team commitment (Arnetz & Blomkvist, 2007; Josefsson *et al.*, 2018; Lindberg & Vingard, 2012; Thompson Brady, 2009; Chapter 2).

Lastly, the organisational size and model are linked to challenging behaviours, and a friendly physical and psychological living environment (e.g. calm atmosphere, stability and predictability) appears to be key for challenging behaviour management because it reduces stress and agitation in the residents and staff (McKenzie *et al.*, 2018; Ruef & Turnbull, 2002; Chapters 2–4). The organisational culture and the physical and psychological living environment influence residents' challenging behaviours directly, and indirectly via staff members' actions and attitudes (Chapter 3).

Macrosystem level

At the macrosystem level (society), deinstitutionalisation with a focus on the restructuring of support services and media attention to bad practices, resulting in an organisational focus on control, may result in a focus on the control of residents' challenging behaviours instead of seeing them beyond these behaviours (Tossebro *et al.*, 2012; Chapters 2 and 3). Second, restrictions due to governmental regulations and the prioritisation of efficiency may also negatively affect challenging behaviours, as residents have less time with staff (Tossebro *et al.*, 2012; Chapters 2–4). Shogren and colleagues (2015) argued that national policies are primarily concept- and value- driven (i.e. process-driven), and that they should be more outcome-driven to better en-

able the evaluation of effectiveness and efficiency, as with the evaluation of disability-related policies using resident outcomes. In addition, residents' living in the community and integration into society may enable challenging behaviour management, and they are essential in support services for residents with intellectual disabilities, given the importance of every person's living of a meaningful life (Bigby & Beadle-Brown, 2018; Graham *et al.*, 2013; McKenzie *et al.*, 2018; Chapters 2 and 5).

Chronosystem level

At the chronosystem level (changes over time), societal views on disability service residents and their support (e.g. regarding the degree of family involvement in support services, residents' integration into society, the establishment of special units for specific populations) have changed in recent years. However, these changed views are difficult to link to residents' challenging behaviours because they are related to support services provided to residents with intellectual disabilities with and without such behaviours (Hamlin & Oaks, 2008; Chapters 2–4). Staff turnover also appears to be linked to challenging behaviour among residents with intellectual disabilities, but the association with support provision by unfamiliar staff members needs to be examined further (Parsons, et al., 2016; Chapters 3 and 5). Insight into other changing aspects at all ecological system levels remains lacking (Chapters 2–5).

Limitations

The nature and direction of relationships between organisational environment aspects, and between these aspects and the challenging behaviour of residents with intellectual disabilities, remain difficult to comprehend (Chapters 2–5). In addition, although a focus on all ecological system levels appears to be required in the context of residents with intellectual disabilities and challenging behaviours, information on aspects at the chronosystem level remains limited (Chapters 2–5); the second research question and the corresponding study reported in Chapter 6 were developed to address this limitation.

7.2.2. Changes made in disability service organisations for residents with intellectual disabilities and challenging behaviours

Changes made in the disability service organisations examined include those made at the exosystem level (e.g. self-organising of staff teams, personnel relocation, development of a new strategic vision) and those made at the meso- and microsystem levels in the staff's attitudes, feelings and competencies (Chapter 6). First, in the case of a messy start of the organisational transition (chrono- and exosystems), staff members, psychologists and managers experience difficulties in understanding how to provide support services according to the new organisational vision and structure (chrono- and mesosystems), which is further complicated when formal and informal interactions between staff members and psychologists or managers to provide staff guidance are lacking (Deveau & McGill, 2019; Deveau *et al.*, 2020; Finlay, 2000; Chapter 6). Second, when

staff, professionals, and managers remain at a distance (exosystem), they may grow insecure and focus less on preventing and managing the challenging behaviours of residents with intellectual disabilities (chrono-, meso- and microsystems) because professionals who feel helpless may have difficulty in constructing positive and stable relationships with residents (microsystem) (Philips & Rose, 2010; Chapter 6). Third, changes in the organisational vision regarding relationships between formal and informal caregivers (chrono- and exosystems) may enhance these relationships if they increase transparency (mesosystem) via the clarification of caregivers' expectations for each other and open discussion; such enhancement is essential for the provision of support to residents (Doody, 2011; Griffith & Hastings, 2014; Griffith *et al.*, 2013; Chapter 6). Organisational change at the exosystem level is based on the assumption that staff members are able and willing to change (chrono-, meso- and microsystems), which is sometimes difficult to fulfil (Greenhalgh *et al.*, 2004; Chapter 6). In addition, even after a long transformation period, the staff may have feelings of being unheard an may have not routinised new working processes, resulting in some inward focus of staff teams (mesosystem), which in turn may negatively affect the support service and resident–staff member interactions (microsystem) (Greenhalgh *et al.*, 2004; Philips & Rose, 20010 White *et al.*, 2003 Chapter 6). Overall, organisational changes are complex and long term, beginning messily and ending in comprehensive transformation of the organisational culture (Finlay, 2000; Greenhalgh *et al.*, 2004; Walker, 2012). These changes aim to improve support services, but they can also complicate the prevention and management of challenging behaviours in residents with intellectual disabilities (Philips & Rose, 2010; Chapter 6). The application of ecological theory aids the detailed examination of the effects of these changes.

7.3. Theoretical and methodological considerations

Reflections on ecological theory

A strength of Bronfenbrenner's ecological theory is that it leads to the examination of individuals' development and functioning as the result of interactions with their environments, and changes in the individuals, interactions and environmental aspects over time (Bronfenbrenner, 2005). The theory's main assumptions are that human beings are shaped by the physical and cultural layers of their environments in the course of their development, and that they able to create and influence their environments; all ecological system aspects are interrelated and interact with each other, with variation in degree and over time (Bronfenbrenner, 2005).

The limitations of ecological theory include the reduced focus on interactions between individuals' environments and those of persons in their social and professional systems, and on the influence of the development and dynamics of groups to which individuals belong. First, the theory underscores the importance of interdependent and multilevel systems to individuals' development, but the relationships between the systems of interacting persons remain unclear (Borgotti *et al.*, 2009; Neal & Neal, 2013). In a group home, for example, a resident's behaviours may be influenced by another resident's extreme challenging behaviours (microsystem), which a reduced staff may be less able to manage (mesosystem), resulting in disagreements between the

staff and that resident's parents (mesosystem) that negatively affect the staff's reaction to the first resident's family members (mesosystem) due to the anxiety generated by the disagreements. The use of social network theory may have improved understanding of this situation, as this theory focuses on relationships between persons (Borgotti *et al.*, 2009; Neal & Neal, 2013). However, the use of ecological theory provides better insight at other ecological system levels (e.g. exo-, macro- and chronosystems) and on the interrelationships and interactions between these levels.

Second, individuals in groups may strengthen each other through the interplay between the individual and the group as a collective; in the context of this thesis, such interplay may influence challenging behaviours in group home residents (Christensen, 2016; Chapters 2–6). Further study of the development and dynamics of groups composed of residents, representatives and staff members may provide supplementary insight because the interactions of these group members form the core of support services. Each group home has its own group dynamics and history (e.g. lifelong residents vs. those residing in a recently built home, less involved and elderly family members vs. very involved and young parents, personal relationships between staff and family members), which may influence challenging behaviours in residents with intellectual disabilities. Nonetheless, the application of ecological theory provided insight into relationships of residents with representatives and staff, as well as relationships with other organisation members who are influenced, for example, by organisational values and financing, societal views and changing organisational structures.

Overall, this study may have been the first in which an ecological perspective was used to examine the relationships between the organisational environment and challenging behaviours in residents with intellectual disabilities. The ecological model provided a strong theoretical and analytical framework, enabling analysis without preconceptions about relationships between aspects at multiple ecological system levels.

Methodological reflections

Mixed-methods research

In mixed-methods research, the researcher collects quantitative (closed-ended) and qualitative (open-ended) data and integrates the findings, drawing interpretations with the use of both analytical designs (Meixner & Hathcoat, 2019). This type of research is conducted in phases, for example by collecting qualitative data to inform the construction of an instrument that is then used to collect quantitative data, or by using qualitative data to provide more in-depth insight into quantitative findings. This approach has its challenges; for example, the creation of a new instrument based on qualitative results is difficult (Meixner & Hathcoat, 2019). Nevertheless, it provided rich and new insight into the topic of this thesis research (see Figure 1).

First, we conducted a scoping review of the relevant literature. A scoping review is a systematic research method that aids the examination of broader topics studied with different study designs, and provides answers to the research question instead of assessing the quality of included studies (Arksey & O'Mally, 2005). The findings of this review aided the framing of the findings of the

subsequent qualitative and quantitative analyses and multiple case study (Shenton, 2004). The review provided a broad, international overview of studied relationships between the organisational environment and challenging behaviours in residents with intellectual disabilities, and more clarity on the lack of ecological studies.

Second, we used a qualitative study design. Qualitative research is interpretive and constructivist, focusing on meanings and interpretations from participants' perspectives, elicited through interviews (Liamputtong, 2019; Nathan, Newman, & Lancaster, 2019). The qualitative studies conducted for this thesis research employed different methods and techniques to enhance credibility (i.e. use of well-recognised research methods, familiarity in the field, ensuring informant honesty), dependability (i.e. in-depth methodological description), confirmability (i.e. provision of study context) and transferability (i.e. reflecting, composing of topic lists) (Liamputtong, 2019; Shenton, 2004). The interviews provided in-depth insight from the complementary perspectives of organisation members (heads of group, psychologists and managers) and residents and their representatives.

Third, we conducted a quantitative study to examine the influences of ecological system aspects identified in the scoping review and qualitative studies on residents' challenging behaviours. Quantitative research involves the objective measurement of data, collected through questionnaires (as in this study) and other means, and analysed statistically (Wilson, 2019). It minimises bias and distances the researcher from the study participants. The use of well-recognised statistical techniques generates accurate results, and large studies with greater generalisability across populations can be conducted (Wilson, 2019). The quantitative study conducted for this thesis research provided further insight into the associations between ecological system aspects and residents' challenging behaviours, and the scoping review and qualitative studies provided context and depth.

Fourth, to address the lack of chronosystem-level data, we conducted a multiple case study with two disability service organisations, which provided rich theoretical insight that may be transferable over time and place (Forrest-Lawrence, 2019; Green *et al.*, 2015; Yin, 2018). Multiple case studies aim to replicate similarities among cases or to predict contrasting results based on the conceptual model (Green *et al.*, 2015; Yin, 2018). Thus, via analytic generalisation, our findings may serve as a framework for the examination of similarities and difference in daily practice in other residential disability service organisations (Forrest-Lawrence, 2019; Yin, 2018). The multiple case study design provided a clear and comprehensive picture of changes in disability service organisations, daily staff practices and residents' lives.

Other research designs may have been able to provide further insight into the research topic. We could not establish the causality of relationships between aspects at different ecological system levels or between ecological system aspects and residents' challenging behaviours. A longitudinal mixed-methods interventional design may have permitted us to do so. Such studies are performed by collecting quantitative and qualitative data before, during and after intervention implementation (Anderson, 2019; Meixner & Hathcoat, 2019). However, given the complexity of the

relationships examined in this thesis, full exploration to inform the development of appropriate interventions was needed. In addition, we had difficulty collecting data from the perspectives of residents, their representatives and staff members, who may have fewer verbal communication or writing skills with which to express their viewpoints. Observational ethnographic fieldwork in the group homes may have improved understanding of how the organisational environment impacts residents' daily lives (Pang, 2019). However, this approach would reduce the focus on the more abstract exosystem-level (e.g. authenticity of leadership, organisational vision) and macrosystem-level (e.g. governmental policies) aspects. Third, challenging behaviours must be managed as quickly as possible because they can limit residents' quality of life. An action-based approach may have been valuable for this research, as it enables the study of complex research topics, such as the disability service organisational environment, through examination of the daily practices of care professionals and managers, while enhancing organisation members' knowledge and competencies through the examination of newly implemented interventions with them, ultimately providing better insight into relevant organisational aspects (Schuiling & Vermaak, 2017). However, this approach may have provided limited information on the causality of the relationships examined.

In appraising our mixed-methods research design, we have provided transparency about the reasons for conducting the different studies, continuously linked the design to the research question, explained the types of method used and provided rationales with respect to the integration of findings from all five studies (Halcomb, 2019). This approach was very useful in examining the complex research topic in detail and answering the research questions.

Participants and setting

The study participants were employed by specialised disability service organisations throughout the Netherlands, had family members living in group homes operated by these organisations, or were residents of these homes. The care provided to people with intellectual disabilities and challenging behaviours in the Netherlands differs from that provided to people with intellectual disabilities in other countries, making generalisation of the findings to other countries difficult. The Dutch system relies largely on institutional care, which differs, for example, from the systems in Scandinavian countries, where care for people with intellectual disabilities is provided in the community. However, we believe that our findings may be useful in other countries, such as the United Kingdom, the Eastern European countries, and the United States of America, where institutional care and support are provided to people with intellectual disabilities and challenging behaviours in a larger clustered housing setting.

This research did not include participants from non-specialised disability service organisations, which also support residents with intellectual disabilities and challenging behaviours. Examination of the culture and structure of these organisations, for example, may broaden the understanding of the relationships examined.

Psychologists and managers participated in three of the five studies conducted for this thesis research; staff members and heads of groups participated in two studies, and residents and their representatives participated in only one study. The perspectives of CEOs and board members were not examined; these organisation members have similar experiences with the disability service organisation environment, but may have additional perspectives on, for example, the histories of the organisations and interactions with the inspectorate of health care and financing institutions.

In addition, we did not differentiate specific groups of staff members, such as employees of the group homes, workplaces and night-care services. These staff groups may have divergent perspectives on the organisational environment, given the differences in their roles, responsibilities and work processes. For example, the night-care staff is responsible for more residents (about 100 in some cases) then is the group home staff (six to eight residents in most cases), and has less or no support from a psychologist; the day-care staff has less contact with residents' representatives, as group home staff members are the first contact persons for representatives on support service topics, and the day-care staff is often supported by a manager with a broader span of control. Overall, however, the combined analysis of data representing the perspectives of residents, their representatives, and different types of organisation member using different methods provided multilevel and broad understanding of the effects of ecological system aspects on residents with intellectual disabilities and challenging behaviours.

Role of the researcher

The researcher's familiarity with the field of intellectual disabilities and challenging behaviours aided the analysis of study participants' perspectives. The researcher had an active role in the selection of participating residential disability service organisations, but organisation members (e.g. psychologists and managers) selected individual participants.

7.4. IMPLICATIONS FOR POLICY AND PRACTICE

The ecological system–based findings of this thesis may be used as a framework in the sector of residential care for people with intellectual disabilities and challenging behaviours. This framework has consequences for national policies (chrono-, macro- and exosystems), organisational policies (chrono-, exo- and mesosystems) and support services provided by disability service staff, heads of group, psychologists and managers (meso- and microsystems).

National policies (chrono-, macro-, exosystem)

National policy makers should consider aspects and interrelationships at all ecological system levels for residents with intellectual disabilities and challenging behaviours. First, they need to determine whether policies will result in organisational changes or entail governmental restrictions affecting organisations, and if so, how they will affect the daily work of organisation members and

the daily lives of residents and their family members. Organisational changes and governmental restrictions implemented with the aim of improving support services may in actuality further complicate the prevention and management of disability service residents' challenging behaviour if they do not align well with the staff's daily work practices.

Second, national policies should enhance organisational aspects, such as managers' and psychologists' leadership, the balance of power in the organisation, and positive organisational values, personnel policies and work climate, in which guidance for staff in daily practices is provided. National policies that are restrictive or focused on control to mitigate bad practices, which are often given media attention, may limit the development of these organisational aspects.

Third, the implementation of national policies must be accompanied by the provision of sufficient resources (e.g. financing, staffing) to meet policy guidelines. Challenging behaviour management is costly, due not only to incident occurrence, but primarily to the need to invest in the facilitation of positive and stable resident–staff interactions with emotional bonding, and to the great demand it places on staff members (i.e. the need to be constant aware), who need to be very competent and skilled in their work.

Fourth, a focus in national policies on the integration of residents into their communities, with engagement in meaningful activities, may improve resident outcomes in support services because every person needs to feel that he or she is important to and supported by others. The education of care professionals needs to include training in the enhancement of residents' integration and engagement. Discussions with residents and their representatives and neighbours may help to inform national policy development to enhance community integration.

Organisational policies (chrono-, exo-, mesosystem)

Organisational policies and goals affecting residents with intellectual disabilities and challenging behaviours also should be developed with consideration of aspects and interrelationships at all ecological system levels. First, the balancing of power in the staff and multidisciplinary teams and in the organisational hierarchy may limit the development of isolated staff teams who resist advice from other organisation members, risking the reduction of support service quality. Staff members must feel that they work in a safe environment in which mistakes are allowed, that they can explore and adjust their actions in providing support, and that a balance between control and trust exists.

Second, sufficient finances and staff members are needed to provide intensive support services to residents with intellectual disabilities and challenging behaviours. The addition of staff members alone does not seem to result in the improvement of support services; the alignment of staff abilities, perspectives and competencies with a clear working method is key for the improvement of challenging behaviour management. The staff's abilities and competencies in daily practice may be enhanced by managers', psychologists' and CEOs' authentic practice leadership in line with a clear organisational vision and mission.

Third, the application of positive organisational values and supportive personnel policies (i.e. conveying that everyone matters; matching organisation members with residents; creating a supportive, positive work climate) to build positive working relationships is not easy. Regular discussion among organisation members about their attitudes and values with respect to resident support, the use of restraint measures and working relationships, and monitoring of these aspects, are helpful.

Fourth, the combined establishment of a friendly physical and psychological living environment for residents and a proper working environment for staff may enhance challenging behaviour management. Thus, organisations need to consider the grouping of residents and staff members in group homes, the working relationships between staff members and other professionals, the ability to facilitate residents' engagement in meaningful activities, and the structure of the facilities and their surroundings.

Fifth, contact with family members is very important for residents, and organisations are obligated to constantly facilitate it. Family members and other representatives of residents depend greatly on the disability service staff and other organisation members. Coaching of staff members in the construction and maintenance of positive, constructive relationships with residents' representatives is needed, as is discussion with representatives about their expectations for support services, and with residents and their representatives about their experience of interactions with the staff.

Lastly, the consideration and implementation of organisational changes entails exploration of the aims of the changes, their impacts on residents and staff, and the process of change and its duration. The process of organisational change is complex and may negatively affect support services if not undertaken with great caution.

Support services (micro-, meso-, exosystem)

In residential disability service organisations, support provision is founded in the actions, competencies and attitudes of staff, heads of group, psychologists and managers. The ecological system aspects identified in this research as relevant for residents with intellectual disabilities and challenging behaviours may be used to provide guidance for daily practices and support service interventions. First, organisation members' positive and sensitive interaction with residents and their representatives needs to be a main goal in support service provision and challenging behaviour management. The provision of stability and emotional bonding in resident–staff member relationships is vital to residents and their representatives. A focus on the reduction of discontinuity of organisation members providing support, and proper matching of these organisation members to residents, may be valuable.

Second, an important theme in staff education and coaching is the use of restraint measures, which residents do not like. The staff's to use clear boundaries without physical restraint during incidents involving challenging behaviour must be fostered.

Third, an important aim of support services is to enable residents to engage daily in meaningful activities in the community. Discussion of how professionals, teams, and the organisation can achieve this goal is needed to prompt appropriate actions to stimulate residents' engagement and integration into their communities.

Fourth, support services may be enhanced further by a focus on the construction of positive working relationships and attitudes among organisation members; enhancement of the feeling of safety in the workplace; balancing of power in multidisciplinary teams and with residents and their representatives; and recognition of the great dependency of residents and their representatives on organisation members. Clear communication in formal and informal interactions between organisation members and with residents and their representatives can facilitate the establishment of positive relationships.

7.5. RECOMMENDATIONS FOR FUTURE RESEARCH

The study of relationships between the organisational environment and challenging behaviours in residents with intellectual disabilities is complex. Additional research conducted from an ecological perspective is needed to investigate the nature and direction of associations between aspects within and across ecological system levels, and their impacts on the challenging behaviours of residents with intellectual disabilities. A longitudinal mixed-methods intervention study based on the numerous relevant ecological system aspects identified in this research may provide more insight in this regard.

Ecological studies of residents, their representatives and different types of staff member as an entity, and the unique environments of each of these groups individually, may augment our findings. These groups form the core of the 24-hour support services provided by disability service organisations for residents with intellectual disabilities and challenging behaviours. Case studies of non-specialised disability service organisations and disability service organisations in other countries also could expand on the findings of this research. These contexts may differ from that examined in this research due to differences in organisational visions and/or societal views on support services.

Ethnographic methods could also be applied in future studies to further explore aspects of residents' natural settings in the organisational environment that impact their daily lives, especially for residents lesser verbal communication and/or writing skills. The inclusion of a person with intellectual disabilities in the research group may be valuable to enhance the understanding of how the organisational environment affects residents' behaviours. Lastly, action-based research may provide an additional perspective on the effects of interventions at different ecological system levels. The implementation and study of interventions together with organisation members also may enhance these members' competencies, leading to improved challenging behaviour management.

7.6. CONCLUSION

The use of ecological theory as a sensitising framework aids understanding of the complex situations in which specialised disability service organisation residents with intellectual disabilities display challenging behaviours. Relevant aspects exist at the onto-, micro-, meso-, exo-, macro- and chronosystem levels, and actions involving these aspects may enhance or limit the prevention and management of challenging behaviours in these residents. These ecological system aspects are associated directly, and indirectly via the staff, with the functioning and development of residents with intellectual disabilities and challenging behaviours. Thus, a holistic ecological perspective on the prevention and management of challenging behaviours is valuable and necessary for the provision of proper support services and management of challenging behaviour management to residents with intellectual disabilities.

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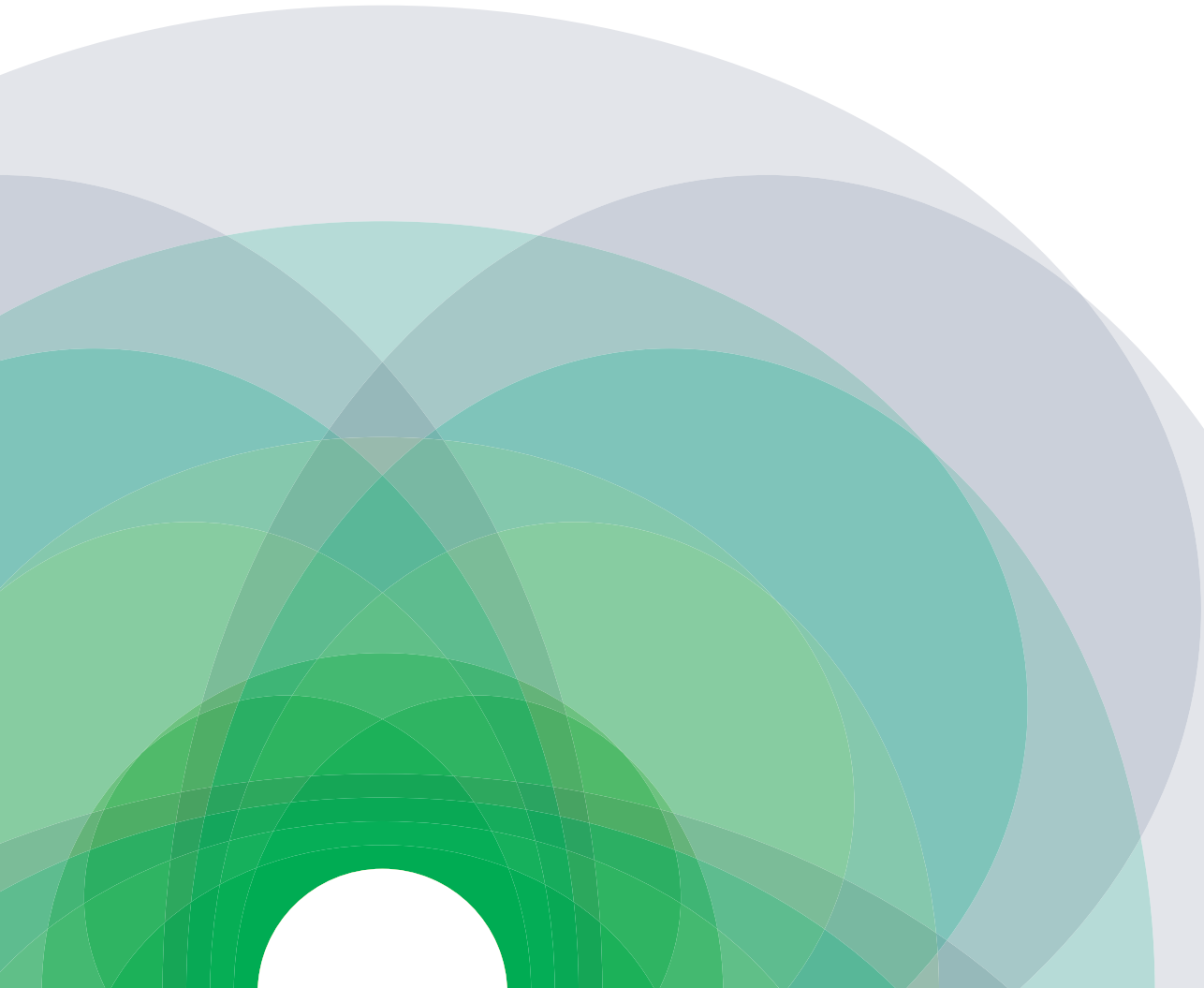


Chapter 8

Summary & samenvatting

SUMMARY

The purpose of this thesis was to explore the relationship between the organisational environment and challenging behaviour in disability service organisation residents with intellectual disabilities using ecological theory. The extent to which various organisational aspects influence residents' challenging behaviour was explored, and whether organisational changes have been made in residential disability services for residents with intellectual disabilities and challenging behaviours.

Chapter 1 describes background information, the ecological theory, the thesis aim and research questions. **Chapter 2** describes a scoping review of the scientific literature performed as an initial exploration of the extent to which different organisational aspects influence challenging behaviour in residents with intellectual disabilities. Ecological theory was used as a sensitising frame. First, combinations of the terms 'intellectual disabilities', 'challenging behaviour' and 'organisation', their synonyms and MeSH terms were used to search the Medline, PiCarta Online Contents, Education Resources Information Center and Springer Link databases. Then, the contents of the *Journal of Applied Research in Intellectual Disabilities*, *Journal of Intellectual Disability Research*, *Journal of Policy and Practice in Intellectual Disabilities* and the journals of the American Association of Intellectual and Developmental Disabilities were searched to identify relevant articles. Articles included were original research reports, literature reviews and case studies published between 2000 and 2016. Twenty-eight articles were included in the analysis. We identified relevant aspects at all ecological system levels (onto-, micro-, meso-, macro- and chronosystems). At the ontosystem level were residents' adaptive and challenging behaviours. At the microsystem level were staff members' perceptions of residents' abilities and challenging behaviour, resident–staff interactions and resident grouping. At the mesosystem level, we identified only one aspect: balance of power and the staff network. At the exosystem level were the organisation's culture, mission statement, size and model, as well as the authenticity of leadership, balance of power, practice leadership, personnel policies, implementation of the working method, performance monitoring, and policy in daily practice. At the macrosystem level, relevant aspects were disability policies, societal structures and belief systems, financing of care and deinstitutionalisation. At the chronosystem level, we identified only service development. Thus, organisational aspects that affect staff members and residents with intellectual disabilities and challenging behaviour range from overall disability policy and budget systems (macrosystem) to the organisational philosophy, leadership, power structure, staff coaching and working methods (exosystem), to staff beliefs and attitudes (microsystem) and resident characteristics (ontosystem). The application of ecological theory aided the identification of organisational aspects that influence challenging behaviour in residents with intellectual disabilities.

Chapter 3 describes a qualitative study conducted to further explore these influences from the perspectives of heads of group, psychologists and managers employed at four specialised residential disability service organisations for residents with intellectual disabilities and challenging behaviours in the Netherlands. The grounded theory approach was used, and ecological

system levels were used as sensitising concepts. Twenty-one interviews were conducted at seven organisation locations. We identified aspects at all ecological system levels. At the ontosystem level, we identified only residents' complex and extreme challenging behaviours. At the microsystem level, we identified the following staff characteristics as influential aspects: the influence of being anxious, seeing residents beyond their challenging behaviours, constant awareness and providing stability in staff–resident interactions. At the mesosystem level were the involvement of family members, the staff's sense of safety and making room for mistakes. At the exosystem level were vision guiding practice, shared values, the sense that everyone matters, control versus trust, allowing the staff to explore, good matching of organisation members with residents, the team context, financial limitations and the living environment. At the macrosystem level were governmental regulations and media attention. At the chronosystem level were dissatisfaction with the degree of family involvement and the integration of residents into society. Thus, aspects of the organisational environment (e.g. vision, values and sufficient resources) are related via the support service (e.g. providing stability, constant awareness) to residents' challenging behaviours, and are linked directly to challenging behaviour (e.g. living environment, values). Organisations, in turn, are affected by national regulations, media attention and changing societal values, which may influence the quality of support. Thus, a supportive organisational environment for staff is needed, and the staff must provide high-quality support services to residents with demanding care needs to prevent challenging behaviour in these residents.

Chapter 4 describes another qualitative study performed to further explore organisational aspects from the perspectives of eight residents and eight of their representatives, using the same approach as for the study described in **Chapter 3**. Aspects were identified at all ecological system levels. At the ontosystem level, aspects related to residents' challenging behaviour were the intensity of support and history of residents' transfer. At the microsystem level were the sensitivity of staff members, seeing residents beyond their challenging behaviour, negative effects of restraint interventions, provision of clear boundaries without physical restraint, formation of strong bonds between residents and primary staff members, and staying in contact with family members. At the mesosystem level were the management of daily agitations in group homes (strict rules or more freedom), staff members' support of each other, searching for better interventions and representatives' dependence on staff. At the exosystem level were the managers' responsibility for the quality of support, psychologists' role in coaching staff, staff turnover, enhancement of staff competence, need for extra finances for the provision of high-quality support, establishment of a shared vision, holding of positive values and expectations, and the establishment of a resident-friendly environment. At the macrosystem level was the prioritisation of efficiency. At the chronosystem level were changes in views on how to support residents. Thus, some organisational aspects (e.g. staff turnover, insufficient finances) can negatively affect interactions among residents, staff and family members, resulting in more challenging behaviour, whereas other aspects (e.g. shared vision, positive values and expectations, competent staff) can positively influence staffs' attitudes and actions, which in turn aids the management of challenging behaviour in residents with intellectual

disabilities. Residents' and their representatives' perspectives help to improve the understanding of the positive and negative influences of the organisational environment on residents' challenging behaviour.

Chapter 5 describes a quantitative study performed with the same objective with organisational staff members, group heads, managers and psychologists. Ecological theory was used as a frame. In total, 922 respondents from 21 organisations completed an online questionnaire that measured ecological aspects selected based on previous findings. Scales included in the questionnaire were validated instruments and, when no such instrument was available for the assessment of certain ecological system aspects, those that we operationalised based on previous qualitative findings. Challenging (self-injurious, aggressive/destructive and stereotypical) behaviours served as the outcome variables. At the microsystem level, aspects were positive resident–staff interactions and the sensitivity of staff members. At the mesosystem level were a proper power balance and staff network. At the exosystem level were the organisational vision regarding the grouping of residents with challenging behaviours together in a home, turnover of direct staff members and the need for extra finances. At the macrosystem level, deinstitutionalisation was associated with the reduction of residents' challenging behaviour. Thus, ecological system aspects affecting residents' challenging behaviour range from staff members' ability to sensitively interact with residents to the grouping of these residents and staff turnover. In the prevention and management of challenging behaviour among residents with intellectual disabilities, ecological aspects at all system levels in the organisational environment must be considered.

Chapter 6 describes a multiple case study conducted to explore whether disability service organisations had made changes affecting the support of residents with intellectual disabilities and challenging behaviours. As the chronosystem was underrepresented in the other studies, we studied two specialised disability service organisations for a 3-year period in this study. We analysed 19 focus group reports, 13 detailed written records of meetings and eight annual organisational and quality reports written by higher management. A variety of themes emerged from the analysis: a messy start to the transition, staff, professionals and managers remain at a distance, staff member's ability to change, clear boundaries between formal and informal caregivers, and staff's feelings of being unheard. The study revealed that organisational change can enhance, but also limit (thereby negatively influencing challenging behaviour), the quality of support services for people with intellectual disabilities. Thus, the process of transition and the influences of organisational changes on residents' challenging behaviour must be examined closely.

In the general discussion presented in **Chapter 7**, the main findings of this thesis are presented and discussed. The research questions are answered, and theoretical and methodological considerations are reviewed. First, we discuss the strengths and limitations of the use of ecological theory based on Urie Bronfenbrenner's model. Second, reflections on the use of a mixed-methods research design with a scoping review and qualitative and quantitative studies and a multiple case study are presented. Finally, remarks are made on the characteristics of the study participants and setting, and on the role of the researcher. Implications for national and organisational policies

and the support services provided in specialised residential disability service organisations are addressed. The discussion ends with recommendations for future research, including longitudinal mixed-methods studies, ecological studies into group homes (including residents, staff members and family members as one group), ethnographic studies, case studies in non-specialised disability service organisations, action-based studies and the option to include a resident in the research group.

This thesis research showed that the use of ecological theory as sensitising framework aids detailed investigation of the organisational environment of specialised disability service organisations for residents with intellectual disabilities who display challenging behaviours. It enabled the identification of relevant aspects at the onto-, micro-, meso-, exo-, macro- and chronosystem levels, as illustrated in Figure 1 (see Chapter 7). These ecological system aspects may enhance or limit the prevention and management of residents' challenging behaviours, and they are directly, or indirectly via staff, linked to residents' functioning and development. Thus, a holistic view on the prevention and management of challenging behaviours is valuable and necessary for the provision of proper support services to residents with intellectual disabilities.

SAMENVATTING

Dit promotieonderzoek had als doel de relatie na te gaan tussen de organisatiecontext van organisaties in de langdurig gehandicaptenzorg en probleemgedrag bij de bewoners met verstandelijke beperkingen, aan de hand van ecologische theorie. Er is onderzocht in welke mate verschillende aspecten in de organisatiecontext het probleemgedrag van bewoners beïnvloeden en of er veranderingen van deze aspecten hebben plaatsgevonden in relatie tot de ondersteuning aan bewoners met verstandelijke beperkingen die probleemgedrag vertonen.

Hoofdstuk 1 beschrijft enige achtergrondinformatie, de ecologische theorie, het doel van het promotieonderzoek en de onderzoeksvragen. **Hoofdstuk 2** beschrijft een verkennend literatuuronderzoek naar de mate waarin verschillende aspecten in de organisatiecontext invloed hebben op probleemgedrag bij bewoners met een verstandelijke beperking. De ecologische theorie werd hierbij gebruikt als een attenderend kader. Eerst is met combinaties van de termen 'verstandelijke beperking', 'probleemgedrag' en 'organisatie', synoniemen daarvan, en MeSH-termen gezocht in de databanken van Medline, PiCarta Online Contents, Education Resources Information Center en Springer Link. Vervolgens werd de inhoud van de *Journal of Applied Research in Intellectual Disabilities*, *Journal of Intellectual Disability Research*, *Journal of Policy and Practice in Intellectual Disabilities* en de tijdschriften van de American Association of Intellectual and Developmental Disabilities doorzocht om relevante artikelen op te sporen. De geïncludeerde artikelen zijn originele onderzoeksrapporten, literatuurstudies en casestudies die tussen 2000 en 2016 zijn gepubliceerd. Achtentwintig artikelen zijn in de analyse opgenomen. We hebben relevante aspecten uitgelicht op alle ecologische systeemniveaus (onto-, micro-, meso-, macro- en chronosysteem). Op het niveau van het ontosysteem betroffen deze het adaptief functioneren en probleemgedrag van de bewoners. Op het niveau van het microsysteem betroffen deze de percepties van de medewerkers over de vaardigheden en het probleemgedrag van de bewoners, de interactie tussen bewoners en begeleiders, en de groepsindeling van de bewoners. Op het niveau van het mesosysteem hebben we slechts één aspect gevonden: de machtsbalans en netwerk van begeleiders. Relevante aspecten op het niveau van het exosysteem waren de cultuur, de missie, de omvang en het model van de organisatie, maar ook de authenticiteit van het leiderschap, de machtsverhoudingen, het praktijk leiderschap, het personeelsbeleid, implementatie van de ondersteuningsmethodiek, prestatiebeoordeling en het beleid in de dagelijkse praktijk. Op het niveau van het macrosysteem waren relevante aspecten het gehandicaptenbeleid, de maatschappelijke waarden en normen, de financiering van de zorg en deïnstitutionalisering. Op het niveau van het chronosysteem hebben we alleen de ontwikkeling van de dienstverlening in kaart gebracht. De aspecten in de organisatiecontext die van invloed zijn op de medewerkers en de bewoners met verstandelijke beperkingen, die probleemgedrag vertonen, variëren dus van het algemeen gehandicaptenbeleid en budgetteringssystemen (macrosysteem) tot de organisatiefilosofie, leiderschap, machtsstructuur, personeelsbeleid en ondersteuningsmethodieken (exosysteem), tot de percepties en attitudes van de begeleiders (microsysteem) en de kenmerken van de bewoners

(ontosysteem). De toepassing van de ecologische theorie was van aanvullende waarde bij het achterhalen van aspecten in de organisatiecontext die het probleemgedrag van bewoners met verstandelijke beperkingen beïnvloeden.

Hoofdstuk 3 beschrijft een kwalitatief onderzoek dat is uitgevoerd om deze invloeden verder te onderzoeken vanuit het perspectief van teamleiders, gedragskundigen en managers die werkzaam zijn bij vier gespecialiseerde organisaties voor mensen met verstandelijke beperkingen en probleemgedrag in Nederland. De gegronde theoretische benadering ('Grounded Theory') en ecologische systeemniveaus dienden hierbij als attenderende concepten. Eenentwintig interviews zijn afgenomen op zeven locaties. Relevante aspecten op alle ecologische systeemniveaus zijn hierbij in kaart gebracht. Op het niveau van het ontosysteem was dit alleen het complexe en extreem probleemgedrag van de bewoners. Op het microsysteemniveau bleken de volgende kenmerken van begeleiders belangrijke aspecten: de invloed van angstig zijn, de bewoners zien als meer dan hun probleemgedrag, constante alertheid, en het bieden van stabiliteit in de interacties tussen begeleiders en bewoners. Op het niveau van het mesosysteem betrof dit de betrokkenheid van familieleden, het gevoel van veiligheid van de begeleiders, en het ruimte bieden voor fouten. Op het niveau van het exosysteem betrof dit de visie die aan de praktijk ten grondslag ligt, gedeelde waarden, het gevoel dat iedereen ertoe doet, controle versus vertrouwen, de medewerkers de ruimte bieden om te exploreren, een goede match tussen de medewerkers en met de bewoners, de teamcontext, financiële beperkingen en de leefomgeving. Op het macrosysteemniveau betrof dit de overheidsregelgeving en de media-aandacht. Op het niveau van het chronosysteem betrof dit de ontevredenheid over de mate waarin clientvertegenwoordigers werden betrokken bij de ondersteuning, en de integratie van bewoners in de samenleving. Zo zijn aspecten van de organisatiecontext (bijv. visie, waarden en voldoende middelen) via de dienstverlening (bijv. het bieden van stabiliteit, constante alertheid) gerelateerd aan het probleemgedrag van bewoners, en rechtstreeks gerelateerd aan het probleemgedrag (bijv. leefomgeving, waarden). De organisaties worden op hun beurt beïnvloed door overheidsregelgeving, media-aandacht en veranderende maatschappelijke normen en waarden, die de kwaliteit van de zorg kunnen beïnvloeden. Derhalve is er behoefte aan een ondersteunende organisatiecontext voor medewerkers en dienen medewerkers kwalitatief hoogwaardige ondersteuning te bieden aan bewoners met veeleisende hulpvragen om probleemgedrag bij deze bewoners te voorkomen.

In **hoofdstuk 4** wordt een volgend kwalitatief onderzoek beschreven dat is uitgevoerd om de aspecten in de organisatiecontext nader uit te diepen vanuit het perspectief van acht bewoners en acht van clientvertegenwoordigers, waarbij dezelfde aanpak is gehanteerd als bij het onderzoek dat in **hoofdstuk 3** is beschreven. Op het niveau van het ontosysteem kwamen aspecten naar voren die verband houden met het probleemgedrag van de bewoners, zoals de intensiteit van de ondersteuning en eventuele eerdere overplaatsingen van de bewoners. Op het niveau van het microsysteem betroffen deze de sensitiviteit van begeleiders, de bewoners zien als meer dan hun probleemgedrag, negatieve effecten van vrijheidsbeperkende maatregelen, het duidelijk aangeven van grenzen zonder fysieke vrijheidsbeperking, het vormen van sterke banden tussen bewoners

en begeleiders, en het in contact blijven met clientvertegenwoordigers. Op mesosysteemniveau betroffen deze het onder controle houden van dagelijks voorkomende onrust in de woningen (strenge regels of meer vrijheid), begeleiders die elkaar onderling steunen, het zoeken naar betere interventies, en het feit dat de clientvertegenwoordigers afhankelijk zijn van begeleiders. Op het niveau van het exosysteem betroffen deze de verantwoordelijkheid van de managers voor de kwaliteit van de ondersteuning, de rol van gedragskundigen in het coachen van begeleiders, het personeelsverloop, het versterken van de competenties van de medewerkers, de behoefte aan extra financiële middelen voor het bieden van hoogwaardige ondersteuning, het vaststellen van een gedeelde visie, het vasthouden aan positieve waarden en verwachtingen, en het creëren van een bewonersvriendelijke omgeving. Op het niveau van het macrosysteem betrof dit het prioriteren van efficiëntiemaatregelen. Op het niveau van het chronosysteem betrof dit veranderingen in de opvattingen over de ondersteuning aan bewoners. Zo kunnen sommige organisatorische aspecten (bv. personeelsverloop, onvoldoende financiën) de interacties tussen bewoners, medewerkers en clientvertegenwoordigers negatief beïnvloeden, hetgeen resulteert in meer probleemgedrag, terwijl andere aspecten (bv. gedeelde visie, positieve waarden en verwachtingen, bekwame begeleiders) de houding en het handelen van de begeleiders positief kunnen beïnvloeden, hetgeen op zijn beurt de begeleiding bij situaties van probleemgedrag bij bewoners met verstandelijke beperkingen ten goede komt. Het perspectief van bewoners en hun vertegenwoordigers draagt bij aan een beter begrip van de positieve en negatieve invloeden van de organisatiecontext op het probleemgedrag van bewoners.

Hoofdstuk 5 beschrijft een kwantitatief onderzoek dat met hetzelfde doel is uitgevoerd onder medewerkers van de organisatie, teamleiders, managers en gedragskundigen. De ecologische theorie diende als attenderend kader. In totaal hebben 922 respondenten van 21 organisaties een online-vragenlijst ingevuld waarin ecologische aspecten zijn gemeten die waren geselecteerd op basis van eerdere bevindingen. De in de vragenlijst opgenomen schalen waren gevalideerde instrumenten en, wanneer voor de beoordeling van bepaalde ecologische systeemaspecten een dergelijk instrument niet beschikbaar was, instrumenten die we op basis van eerdere kwalitatieve bevindingen hadden geoperationaliseerd. Probleemgedragingen (zelfverwonding, agressief/destructief en stereotiep gedrag) dienden als uitkomstvariabelen. Aspecten op het microsysteemniveau waren de positieve interacties tussen de bewoners en de begeleiders, en de sensitiviteit van de begeleiders. Op het niveau van het mesosysteem betroffen deze de machtsbalans en netwerk van begeleiders. Op het exosysteemniveau betroffen deze de visie van organisatie met betrekking tot de indeling van bewoners met probleemgedrag in een groep, het verloop onder begeleiders, en de behoefte aan extra financiën. Op macrosysteemniveau ging deïnstitutionalisering gepaard met het terugdringen van het probleemgedrag van bewoners. Zo variëren de ecologische aspecten die het probleemgedrag van bewoners beïnvloeden van de capaciteit van de medewerkers om op een sensitieve manier met bewoners om te gaan tot de groepsindeling van deze bewoners en het personeelsverloop. Wat betreft de preventie en het begeleiden in situaties van probleemgedrag

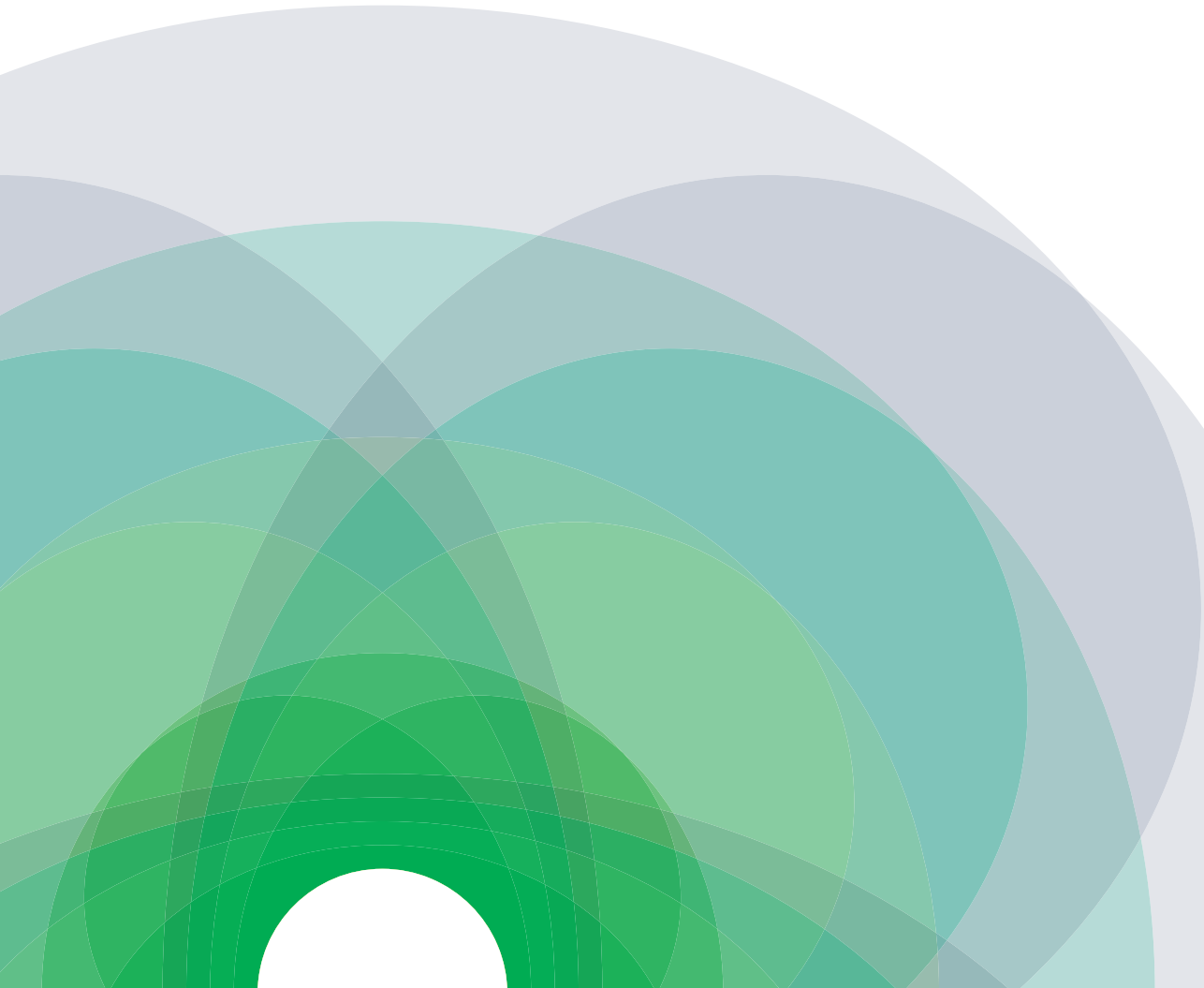
van bewoners met verstandelijke beperkingen moet rekening worden gehouden met ecologische aspecten op alle systeemniveaus in de organisatie.

Hoofdstuk 6 beschrijft een meervoudige case-study die werd uitgevoerd om na te gaan of organisaties in de langdurige gehandicaptenzorg veranderingen hadden doorgevoerd die van invloed waren op de ondersteuning van bewoners met verstandelijke beperkingen die probleemgedrag vertonen. Aangezien het chronosysteem ondervertegenwoordigd was in de andere studies, hebben we in deze studie twee gespecialiseerde gehandicaptenzorgorganisaties over een periode van drie jaar gevolgd. Voor dit doel hebben we 19 verslagen van focusgroepen, 13 gedetailleerde schriftelijke verslagen van vergaderingen en acht jaarlijkse organisatie- en kwaliteitsrapporten van het hoger management geanalyseerd. Uit de analyse kwamen verschillende thema's naar voren: een rommelig begin van een transitieproces, een grote afstand tussen begeleiders, gedragskundigen en managers, het vermogen van medewerkers om mee te gaan met veranderingen, duidelijke grenzen tussen formele en informele zorgverleners en het gevoel van begeleiders dat ze niet worden gehoord. Uit het onderzoek kwam naar voren dat organisatorische veranderingen de kwaliteit van de ondersteunende diensten voor mensen met verstandelijke beperkingen kunnen verbeteren, maar ook kunnen tegengaan (en daarmee een negatieve invloed hebben op het probleemgedrag). Zowel het transitieproces als de invloed van organisatorische veranderingen op het probleemgedrag van bewoners moeten dus goed worden onderzocht.

In de algemene beschouwing in **hoofdstuk 7** zijn de belangrijkste bevindingen van dit proefschrift gepresenteerd en besproken. De onderzoeksvragen zijn beantwoord en theoretische en methodologische overwegingen zijn belicht. Allereerst is ingegaan op de sterke punten en beperkingen van het gebruik van de ecologische theorie op basis van het model van Urie Bronfenbrenner. Ten tweede is de toepassing van een mixed-methods onderzoeksopzet – bestaande uit een verkennend literatuuronderzoek, kwalitatieve en kwantitatieve studies, en een meervoudige case-study – onder de loep genomen. Tot slot zijn kanttekeningen gemaakt over de kenmerken van de deelnemers aan het onderzoek en de setting, en over de rol van de onderzoeker. Er is ingegaan op de implicaties voor het nationale en organisatiebeleid en de ondersteuning aan bewoners met verstandelijke beperkingen. Verder zijn aanbevelingen voor toekomstig onderzoek gedaan, zoals longitudinale mixed-methods interventie studies, ecologische studies naar woningen (inclusief bewoners, begeleiders en clientvertegenwoordigers als één groep), etnografische studies, case-studies in niet-gespecialiseerde dienstverlenende organisaties voor mensen met verstandelijke beperkingen, actieonderzoek, en de optie om een bewoner in de onderzoeksgroep op te nemen.

Dit promotieonderzoek maakt duidelijk dat het gebruik van de ecologische theorie als attenderend kader van aanvullende waarde is bij het in detail bestuderen van de organisatiecontext van gespecialiseerde organisaties voor mensen met verstandelijke beperkingen die probleemgedrag vertonen. Dit maakte het mogelijk relevante aspecten te achterhalen op onto-, micro-, meso-, exo-, macro- en chronosysteemniveau. Deze ecologische systeemaspecten kunnen de preventie en het omgaan met probleemgedrag van de bewoners verbeteren of beperken, en ze zijn direct, of indirect via de begeleiders, gekoppeld aan het functioneren en de ontwikkeling van de bewo-

ners. Een holistische visie op de preventie en het omgaan met probleemgedrag is dus waardevol en noodzakelijk voor het verlenen van goede ondersteuning aan bewoners met verstandelijke beperkingen.



Appendices

Dankwoord

About the author

PhD portfolio

DANKWOORD

Wat maakt dat het gegaan is zoals het is gegaan?

Soms komen dingen spontaan bij elkaar.

De visie van het Centrum voor Consultatie en Expertise (CCE) is 'Probleemgedrag in context'. Probleemgedrag is de resultante van de interactie van iemand met zijn omgeving; het is geen clientkenmerk. De afgelopen 10 jaar is CCE bezig geweest met projecten en onderzoek naar de organisatiecontext in relatie tot probleemgedrag. Het laatste onderzoeksproject heet Inzicht in Context, dat 5 jaar geleden is gestart. Het ministerie van VWS bood CCE de mogelijkheid om dit gedegen aan te pakken door subsidie te geven. En 4 jaar geleden kwam daarin ruimte om promotie onderzoek aan toe te voegen; onder begeleiding van prof. dr. Anna Nieboer van de Erasmus School of Health Policy and Management en haar collega dr. Jane Cramm.

Zelf vind ik het snijvlak tussen orthopedagogische wetenschappen en zorgmanagement al jaren boeiend. Mijn toenmalige leidinggevende vond dat ik me weer eens goed moest vastbijten in een mooi thema. Ik mocht vanuit CCE promotie onderzoek doen naar de organisatiecontext van situaties van ernstig en aanhoudend probleemgedrag onder begeleiding van Anna en Jane. Op dat moment was ik alweer 9 jaar eerder bij Anna afgestudeerd. Zo kwamen spontaan oude en nieuwe contacten bij elkaar.

Bijzondere positie.

Het is een bijzondere positie om te werken bij CCE. Het is een landelijke organisatie met een enorm netwerk aan organisaties binnen de verstandelijk gehandicaptenzorg. Deze positie heeft ontzettend veel deuren geopend om op verschillende plekken en met verschillende mensen uit het veld de organisatiecontext te bestuderen. Op de meest bijzondere en uiteenlopende plekken in Nederland ben ik de afgelopen jaren geweest. Overal was ik van harte welkom om te praten over en te bestuderen wat hun organisatiecontext was.

Dankzij, niet ondanks.

Bij de start van het promotie onderzoek was mijn jongste van 3 zoons bijna 1 jaar. Een mooi moment om me volledig te verdiepen in organisatiecontexten in de langdurig verstandelijk gehandicaptenzorg. De dynamiek van mijn jonge gezin heeft me geholpen bij het focus houden binnen de onderzoeken. Dankzij hen (en dus niet ondanks) heb ik niet allerlei uitweidingen gedaan en bleef ik op koers.

Aan de slag.

Verschillende mensen wil ik bedanken omdat ze een positieve en kritische context boden om aan de slag te gaan. Mijn proefschrift was niet tot stand gekomen zonder de inzet van Anna Nieboer en Jane Cramm. Ruim vier jaar hebben ze elke keer weer mij een stukje verder opgerekt. Door

hun precieze en heldere feedback en vragen kwam ik steeds een stapje verder. Zonder het gevoel te hebben dat er druk op lag. In alle rust hebben we al die jaren goed kunnen samenwerken. Ik ben hen daar heel dankbaar voor.

Ook wil ik Rieneke de Wit bedanken. Als opdrachtgever van het promotie onderzoek heeft zij samen met mij gepuzzeld wat de bevindingen uit de deelonderzoeken voor de praktijk zouden kunnen betekenen. Dit scherpte altijd weer mijn gedachtes. Dankzij Marjan Boertjes heb ik ervaren dat er ruimte was om me te storten in het promotie onderzoek en daarnaast de CCE praktijk te blijven volgen.

Het CCE project Inzicht in Context is de aanleiding geweest voor het promotie onderzoek. Doordat ik samen kon optrekken met mijn collega's Rutger Clarijs, Jaap van den Heuvel, Cilia Jansen, Romaine Roest, Nelleke Sikking, Janita van der Vinne, Andrea Zwaanswijk, en *last but not least* Wouter Landman in het project heb ik altijd het gevoel gehad dat ik niet alleen aan het worstelen was met 'de organisatiecontext'. Ik dank hen hier voor.

Ook Silvy Karstens, Sandra de Groot en Trijntje Veenstra hebben veel werk verzet om het tempo in het promotie onderzoek te houden. Zonder hen was het niet in vier jaar gelukt. Dank jullie wel.

Een hartelijke dank aan alle deelnemers in de verschillende deelonderzoeken. Door hun openheid en bereidheid om mee te werken in het onderzoek is het mogelijk geweest meer grip te krijgen op de rol van de organisatiecontext op probleemgedrag.

Ook ben ik dank verschuldigd aan prof.dr.ir. Kees Ahaus, prof.dr. Petri Embregts, prof.dr. Pauline Meurs voor hun zitting in de beoordelingscommissie en aan dr. Wil Buntinx, prof.dr. Roland Bal en prof.dr. Robbert Huijsman voor het opponeren bij de verdediging van mijn proefschrift.

Extra dank gaat uit naar Wouter en Wil, die ook een rol als co-auteur van een artikel op zich wilden nemen.

Energie en motivatie op peil houden.

Verschillende mensen wil ik bedanken omdat ze een uitdagende context creëerden waarvan ik altijd energie kreeg en door gemotiveerd raakte om met het promotie onderzoek bezig te zijn. Mijn collega's binnen CCE (coördinatoren, consulenten/casemanagers, projectleiders/adviseurs van het TEM, leden van de afdeling Communicatie) en collega's in het werkveld die met regelmaat vroegen hoe het ging en met veel plezier mijn blogs lazen. Hun enthousiasme toonden voor alles wat ik vond in mijn onderzoek en wat dat zou kunnen betekenen voor hun eigen werk. En door het bieden van een inkijkje in hun dagelijkse praktijk.

Steunstructuur is essentieel.

Ook wil ik de volgende mensen bedanken omdat ze een steunende context waren waarin ik ook gewoon lekker mijn ding kon doen. Allereerst natuurlijk mijn gezin: de liefde van Mark, Quinten, Yonathan en Sebastiaan is voor mij erg belangrijk geweest. Zij zorgden ervoor dat ik goed kon relativeren en dat er altijd een goede reden was om ook andere dingen te doen dan

werken aan mijn promotie onderzoek. De gezelligheid van mijn vrienden en hun mee leven met elke mijlpaal waardeer ik nog steeds zeer. Mijn dank aan mijn ouders en broertje die het goede voorbeeld stelden door ook altijd en continu nieuwsgierig te blijven, verder te leren en te onderzoeken en door te laten zien dat het belangrijk is dat iedereen het verdient om in een goede omgeving te leven doordat iedereen zijn steentje bijdraagt. En Pauline van der Schaaff waarmee ik de afgelopen jaren heel veel nieuwe activiteiten samen heb gedaan (bijv. pubquiz, padellen, straatfeesten, etc.) en veel plezier heb beleefd tijdens onze gezamenlijke etentjes en vakanties met onze gezinnen. Mark en Pauline, dank dat jullie mijn paranimfen zijn.

ABOUT THE AUTHOR

Vanessa Olivier-Pijpers was born on April 4th, 1980, in Breda, the Netherlands. She graduated from the University of Leiden in 2004 with a Master's degree in Pedagogical Sciences; her work focused on the pedagogical climate for children under the age of 12 years who display challenging behaviours. In 2007, she graduated from the Erasmus School of Health Policy and Management, Erasmus University of Rotterdam, with a Master's degree in Healthcare Management; this work focused on community care implementation in disability service organisations. During the pursuit of these Master's degrees, Vanessa was employed as a staff member in a children's day care centre, a home care service for elderly people, and residential group homes for people with intellectual disabilities and challenging behaviours. At the end of her second Master's programme, she worked as a psychologist at the residential disability service organisation 's Heerenloo Noordwijk. In 2007, she began work as a psychologist at Stichting Epilepsie Instellingen Nederland (SEIN), a specialised residential service organisation for people with epilepsy, other disabilities, and challenging behaviours, and as a junior researcher at the Erasmus School of Health Policy and Management. In 2011, she was employed as the deputy head of the healthcare centre for SEIN group homes and workplaces. In 2013, Vanessa transferred to the Centre for Consultation and Expertise (CCE), where she served as a case coordinator. Her PhD project at the Erasmus School of Health Policy and Management focused on the relationships between the organisational environments of residential disability service organisations and challenging behaviours in residents with intellectual disabilities. This mixed-methods research has led to several publications in national and international peer-reviewed journals. In 2017, Vanessa was nominated for the Graduate School Award for PhD Excellence at Erasmus University. She has also participated in CCE projects focusing on bridging the gap between science and practice in the provision of support to people displaying challenging behaviours.

PHD PORTFOLIO

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PhD period: 2016-2020
Promotor: Prof. dr. Anna P. Nieboer
Copromotor: dr. Jane M. Cramm

Presentations

Workshop *Organisational environment* at CCE course for managers in Den Dolder, 2019

Presentation at *Insights into organisational environment* at symposium Looking together differently at aggression / The whole is more in Losser, 2019

Preconference course *Insights into the organisational environment* at EAMHID in Barcelona, 2019

Presentation *Challenging behaviour: It's a puzzle* at EAMHID in Barcelona, 2019

Presentation *A scientific session on organisational environment* at SCORE symposium in Leiden, 2018

Workshop *Organisational environment* at CCE course for managers in Tiel, 2018

Workshop *Organisational environment* at CCE course for managers in Gouda, 2018

Presentations *Organisational environment* for CCE organisation members, 2017-2019

Presentation *Positive interactions are key in complex situations* at Gentle Teaching International Conference in Breukelen, 2018

Presentation *Challenging behaviours in context* at Focus op Onderzoek, 2018

Presentation *The art of belonging and challenging behaviours* at Disability Studies congress in Amsterdam, 2017

Posterpresentation *The Organisational Environment and Challenging Behaviour in People With Intellectual Disabilities* at EAMHID in Luxembourg, 2017

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Courses

Course *Presenting in English*, 2019

Course *Deep Democracy level 1*, 2019

Course *Analytic Storytelling*, 2018

Incompany course *Professional use of LinkedIn*, 2018

Incompany course *Levers in change management*, 2018

Course *Presenting and interviewing in front of the camera*, 2018

Incompany course *Change management and systemic theory*, 2018

Course *New techniques in interviewing*, 2018

Course *Emotional Development of people with intellectual disabilities*, 2018

Course *Interview techniques*, 2017

Incompany course *Deep Democracy: basic principles*, 2017

Course *Presenting in English and writing in English for scientific purpose*, 2017

Course and supervision on *Qualitative research design and the use of Atlas.ti*, 2016

Course and supervision on *Qualitative research, interviews and focus groups*, 2016